

EPA Jacket 35900-3

Vol.1

DECISION PKG. NO. 338469

SUBM. DUE DATE 5-2-04

SUBMISSION BAR CODE # 753457

REVIEWER P Jenkins

CODING FORM FOR APPLICATIONS FOR REGISTRATION/AMENDMENTS

FILE SYMBOL/REG NO. 35500-3 PM 33 ACTION CODE 302

DESCRIPTOR	FQPA	NFQPA

☐ CHILD RESISTANT PACKAGING: ☐ REQUIRED ☐ NOT REQUIRED

REGISTRATION TYPE: ☐ CONDITIONAL ☐ UNCONDITIONAL ☐ RESTRICTED USE

DATE ON APPLICATION

EPA RECEIVE DATE

PM RECEIVE DATE

01, 28, 04

02, 02, 104

02106 104

METHOD OF SUPPORT

FORMULATORS EXEMPTION

<input type="checkbox"/> CITE-ALL	<input type="checkbox"/> SELECTIVE
<input type="checkbox"/> NOT SUBMITTED	<input type="checkbox"/> N/A

[] SUBMITTED [] NOT SUBMITTED
[] N/A

REVIEW(S) REQUESTED

DATA
PACK #DATE
SENTDUE
DATEDATE
RETURNED

CHEMISTRY

EFFICACY _____) [_____] [_____] [_____]

ACUTE TOX. _____] [_____] [_____] [_____]

RASSB TOX. _____] [_____] [_____] [_____]

ENVIRON. PATE _____] [_____] [_____] [

FISH/WILDLIFE] [] [] [
---------------	-----	-----	-----

OTHER: : : : :

STATUS _____

RESPONSE CODE

RESPONSE DATE

MAR 18 2004

SCIENCE GROUP	DIVISION	BRANCH	SECTION	CSF Y/N	LABEL Y/N
CHEMISTRY	AD	EASSB	CTT		
EFFICACY	AD	EASSB	EET		
ACUTE TOX	AD	EASSB	CTT		
RISK TOX	AD	RASSB	TEAM 1		
EXPOSURE	AD	RASSB	TEAM 1		
ENV. FATE	AD	RASSB	TEAM 2		
FISH/WILD	AD	RASSB	TEAM 2		

INSTRUCTIONS
INCLUDE MRID#S

INSTRUCTIONS

INSTRUCTIONS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

MAR 18 2004

MAR 18 2004

Lewis & Harrison, Agent for
Ionics, Inc.
c/o 122 C Street, N.W. Suite 720
Washington, DC 20001

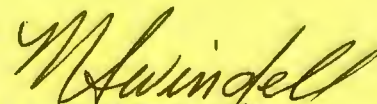
Attention: Christina M. Swick

Subject: General Ionics Model IQ0820B Bacteriostatic Water Conditioner
EPA Registration No. 35900-3
Amendment Application Dated: January 28, 2004
EPA Received Date: February 2, 2004

This will acknowledge receipt of your letter dated January 28, 2004, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, in response to PR-Notice 2001-1 "First Aid Statement". This information is acceptable and will be placed in subject product file.

If you have any comments or questions concerning this letter, please contact me at 703-308-6341 or Portia Jenkins at 703-308-6230

Sincerely,



Marshall Swindell
Product Manager (33)
Regulatory Management Branch I
Antimicrobials Division (7510C)

CONCURRENCES							
SYMBOL							
SURNAME							
DATE							

Receipt for Section 3

S: 753457

Regulatory Type: Product Registration - Section 3

Application Type: Antimicrobial

Company: 35900 IONICS, INCORPORATED V

Print Letter

Enter More Information

Risk Manager: Antimicrobials Division, Risk Management Team 33

Product #: 35900-3 Product Name: GENERAL IONICS MODEL IQ0820B BACTERIC

Me Too Section3: Me Too Product Name:

Application Date: 26-Jan-2004 OPP Rec'd Date: 02-Feb-2004

Front End Date: 06-Feb-2004 Risk Manager Send Date: 06-Feb-2004

Fast Track: Studies:

Receipt Description:

Signature: []
Signature: []
Signature: []
Signature: []

SUBMISSION BAR CODE # 5613901 REVIEWER K. Leary-MunkCODING FORM FOR APPLICATIONS FOR REGISTRATION/AMENDMENTSFILE SYMBOL/REG NO. 35900-3 PM 33 ACTION CODE 362DESCRIPTOR Formula Amendment

☐ CHILD RESISTANT PACKAGING: ☐ CERTIFICATION
☐ NON-RESIDENTIAL USE ONLY
☐ NOT APPLICABLE

REGISTRATION TYPE: ☐ CONDITIONAL ☐ UNCONDITIONALPROPOSED CLASSIFICATION: ☐ GENERAL ☐ RESTRICTED USE

DATE ON APPLICATION

EPA RECEIVE DATE

PM RECEIVE DATE

04	03	02
----	----	----

04	03	02
----	----	----

04	05	02
----	----	----

METHOD OF SUPPORTFORMULATORS' EXEMPTION

☐ CITE-ALL
☐ SELECTIVE
☐ NOT SUBMITTED
☐ NOT APPLICABLE
☐ INCORRECT/RESUB

☐ SUBMITTED
☐ NOT SUBMITTED
☐ NOT APPLICABLE
☐ INCORRECT/RESUB

REVIEW(S) REQUESTED

DATA
PACK #DATE
SENTDUE
DATEDATE
RETURNEDCHEMISTRY

EFFICACY

TOXICOLOGY

HED TOX.

ENVIRON. FATE

FISH/WILDLIFE

OTHER

STATUS

RESPONSE CODE

17

RESPONSE DATE

MAY 21 2002



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

MAY 21 2002

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Ms. Christina M. Swick,
Agent for Ionics, Inc.
3039 Washington Pike
Brigdeville, PA 15017

Subject: General Ionics Model IQ820BBacteriostatic Water Conditioner
EPA Registration Number 35900-3
Your Submission Dated April 3rd, 2002
EPA Received Date April 3rd, 2002

Dear Ms. Swick:

The following amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, to change the address of the production facility and list an alternate supplier for the inert ingredient in the formulation for the basic formulation and substitute the inert [REDACTED], for "[REDACTED]" is acceptable:

- Basic formula
- Alternate Confidential Statement of Formula
- Data Matrix
- Administrative Materials

Acceptable Data

Chemistry Data

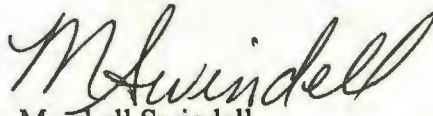
The Confidential Statements of Formula for the amended basic and alternate formula and the new alternate formula, dated May 7th, 2002, are acceptable.

The nominal concentration of the active ingredient silver listed on the Confidential Statements of Formula are in agreement with that listed in the label ingredient claims statement. It is in compliance with PR Notice 91-2.

Additional supplier's names and addresses and a change in the name of the product facility have been added to the Confidential Statements of Formula.

If you have any questions concerning this letter, please contact Karen M. Leavy-Munk at (703)-308-6237.

Sincerely,

A handwritten signature in cursive script, appearing to read "M. Swindell".

Marshall Swindell
Product Manager 33
Regulatory Management Branch I
Antimicrobial Division(7510C)

**EPA**

United States
Environmental Protection Agency
Washington, DC 20460

☐ Registration
☒ Amendment
☐ Other

OPP Identifier Number

287811

Application for Pesticide - Section I

1. Company/Product Number 35900-3	2. EPA Product Manager Marshall Swindell	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) General Ionics Model IQ0820B Bacteriostatic Water Conditioner	PM# Team 33	
5. Name and Address of Applicant (Include ZIP Code) Ionics, Inc. 3039 Washington Pike Bridgeville, PA 15017 <u>PLEASE SEND ALL CORRESPONDENCE TO</u> <u>"CONTACT POINT" LISTED BELOW</u> <input type="checkbox"/> Check if this is a new address		6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(I), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____

Section - II

<input checked="" type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application
<input type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below

Explanation: Use additional page(s) if necessary. (For Section I and Section II.)

Formula Amendment - Revised Basic Formula and Proposed Alternate Formula

Section - III

1. Material This Product Will Be Packaged In:			
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No If "Yes" Unit Packaging wgt. No. per container	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No If "Yes" Package wgt. No. per container	2. Type of Container <input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify)
*Certification must be submitted			
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container	4. Size(s) Retail Container	5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Other _____ <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled			

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application)			
Name Christina M. Swick, Lewis & Harrison, 122 C Street NW Suite 740, Washington DC 20001	Title Agent for Ionics, Inc.	Telephone No. (include Area Code) 202-393-3903 x16	
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.			6. Date Application Received
2. Signature 	3. Title Agent for Ionics, Inc.		
4. Typed Name Christina M. Swick, Lewis & Harrison	5. Date April 3, 2002		



United States
Environmental Protection Agency
Washington, DC 20460

☐ Registration
☐ Amendment
☐ Other

OPP Identifier Number

287811

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification <input type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name)	PM#	
5. Name and Address of Applicant (Include ZIP Code) <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input checked="" type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Metal	<input type="checkbox"/> Plastic
<input checked="" type="checkbox"/> Certification must be submitted	If "Yes" Unit Packaging wgt. _____	No. per container _____	If "Yes" Package wgt. _____	No. per container _____	<input type="checkbox"/> Glass
					<input type="checkbox"/> Paper
					<input type="checkbox"/> Other (Specify) _____
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container		5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled		<input type="checkbox"/> Other _____			

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name	Title	Telephone No. (Include Area Code) _____
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature	3. Title	
4. Typed Name	5. Date	

PAPERWORK REDUCTION ACT NOTICE and INSTRUCTIONS

PAPERWORK REDUCTION ACT NOTICE: Public reporting burden for this collection of information is estimated to average 0.85 hour per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, (2136), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460.

INSTRUCTIONS: This form is to be used for all applications for new registration, and use reregistration, amendment, resubmission, to applications for notifications, final printed labeling, reregistration, etc. In order to process an application for a new registration submitted on this form, the following material must accompany the application:

1. Certification with Respect to Citation of Data (EPA Form 8570-29). [If not exempted by 40 CFR 152.61 (b) (4)];
2. Confidential Statement of Formula (EPA Form 8570-4);
3. Formulator's Exemption Statement (EPA Form 8570-27);
4. Five copies of draft labeling;
5. Three copies of any data submitted;
6. Authorization letter where applicable;
7. Matrices where applicable.

Submission of Labeling - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8.5 x 11 inch paper for submission or a mockup of the proposed label. If prepared for mockup, it should be constructed in a way as to facilitate storage in an 8.5 x 11 inch file. Mockup labels significantly smaller than 8.5 x 11 inches should be mounted on 8.5 x 11 inch paper for submission.

Submission of Data - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

SPECIFIC INSTRUCTIONS: Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Sections I, III, and IV must be completed by the applicant. For applications submitted in connection with amended reregistration actions, resubmissions, notifications, reregistrations, etc., Sections I, II, and IV must be completed by the applicant.

Block A - Check the appropriate action for which you are submitting this form.

SECTION I - This section must be completed, as applicable, for all registration actions.

1. **Company/Product Number** - Insert your Company Number, if one has been assigned by EPA. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If your product is registered, insert the Product Number.
2. **EPA Product Manager** - If known, fill in the name and PM number of the EPA Product Manager.
3. **Proposed Classification** - Specify the proposed classification of this product.
4. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom the registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters. An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.
6. **Expedited Review** - FIFRA section 3 (c) 3 (B) provides for expedited review of applications for registration, or amendments to existing registration that are similar or identical to other pesticide products that are currently registered with the EPA. In order for your application to be eligible for expedited review, you must provide us with the EPA Registration Number and product name of the product you believe is similar to or identical to your product. The product must be similar or identical in both formulation and labeled uses.

SECTION II - This section must be completed for all applications submitted to amend the registration only of a currently registered product (Amendment), for a resubmission in response to an Agency letter, for notifications to the Agency, for the submission of final printed labeling, for reregistration and for any other action that pertains to a specific EPA-registered product. This section is not to be used for a new application for registration.

1. **Subject of submission** - Check the applicable block and provide the Agency letter date if appropriate. Provide a brief explanation of the purpose(s) for the submission, such as "the addition of a site, pest or crop (specify)"; "amend the Confidential Statement of Formula by..."; "reregistration submission"; "general label revision of use directions." Attach a separate page if additional space is needed.

SECTION III (Packaging and Container Information) - This Section must be completed for all applications submitted in connection with new registration or applicable amendments.

1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Indicate the location of the net contents information for your product.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicate the method product label is attached to retail container.

SECTION IV (Contact Point) - This Section must be completed for all applications for Registration actions, i.e., new products registration, resubmission, "me...", reregistration, etc.

- 1-5. Self-explanatory. . . .
6. EPA Use Only. . . .



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 1.25 hours per response for registration activities and 0.25 hours per response for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not send the form to this address.

Certification with Respect to Citation of Data

Applicant's/Registrant's Name, Address and Telephone Number Ionics Inc.: 3039 Washington Pike, Bridgeville, PA 15017 / 202-393-3903 (Agent)	EPA Registration Number/ File Symbol 35900-3
Active Ingredient(s) and/or representative test compound(s): Silver (EPA A.I.# 72501)	Date April 3, 2002
General use pattern(s) (list all those claimed for this product using 40 CFR Part 158) Aquatic Food Crop	Product Name General Ionics Model IQ0820B Bacteriostatic Water Conditioner

NOTE: If your product is a 100% repackaging of another purchased EPA-registered product labeled for all the same uses on your label, you do not need to submit this form. You must submit the Formulator's Exemption Statement (EPA Form 8570-27).

- ☐ I am responding to a Data Call-In Notice, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).

SECTION I: METHOD OF DATA SUPPORT (Check one method only)

- ☐ I am using the cite-all method of support, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).
- ☒ I am using the selective method of support (or cite-all option under the selective method), and have included with this form a completed list of data requirements (the Data Matrix form must be used).

SECTION II: GENERAL OFFER TO PAY

[Required if using the cite-all method or when using the cite-all option under the selective method to satisfy one or more data requirements]

- ☒ I hereby offer and agree to pay compensation, to other persons, with regard to the approval of this application, to the extent required by FIFRA.

SECTION III: CERTIFICATION

I certify that this application for registration, this form for reregistration, or this Data Call-In Notice is supported by all data submitted or cited in the application for registration, the form for reregistration, or this Data Call-In response. In addition, if cite-all option under the selective method is indicated in Section I, this application is supported by all data in the Agency's files that (1) concern the properties or effects of this product or an identical or substantially similar product, or one or more of the ingredients in this product; and (2) is a type of data that would be required to be submitted under the data requirements in effect on the date of approval of this application if the application sought the initial registration of a product of identical or similar composition and uses.

I certify that for each exclusive use study cited in support of this registration or reregistration, that I am the original submitter or that I have obtained the written permission of the original submitter to cite that study.

I certify that for each study cited in support of this registration or reregistration that is not an exclusive use study, either: (a) I am the original data submitter; (b) I have obtained the written permission of the original data submitter to use this study in support of this application; (c) all periods of eligibility for compensation have expired for the study; (d) the study is in the public literature; or (e) I have notified in writing the company that submitted the study and have offered (i) to pay compensation to the extent required by sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA; and (ii) to commence negotiations to determine the amount and terms of compensation, if any, to be paid for the use of the study.

I certify that in all instances where an offer of compensation is required, copies of all offers to pay compensation and evidence of their delivery in accordance with sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA are available and will be submitted to the agency upon request. Should I fail to produce such evidence to the Agency upon request, I understand that the Agency may initiate action to deny, cancel or suspend the registration of my product in conformity with FIFRA.

I certify that the statements I have made on this form and all attachments to it are true, accurate and complete. I acknowledge that any knowingly false or misleading statements may be punishable by fine or imprisonment or both under applicable law.

Signature <i>Christina M. Swick</i>	Date April 3, 2002	Typed or Printed Name and Title Christina M. Swick - Agent for Ionics Inc.
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

401 M Street, S.W.
WASHINGTON, D.C. 20460

Form Approved OMB No. 2070-0060

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per response for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not send the form to this address.

DATA MATRIX

Date April 3, 2002		EPA Reg. No./File Symbol 35900-3		Page 1 of 1	
Applicant's/Registrant's Name & Address: Ionics, Inc. 3039 Washington Pike, Bridgeville, PA 15017		Product General Ionics Model IQ0820B Bacteriostatic Water Conditioner			
Ingredient(s): Silver (A.I.# 72501)					
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
61-1 to 62-3	Product Identity, Composition and Analysis				Waived ¹
63-2 to 63-9	Physical/Chemical Properties				Waived ¹
71-1(a)	Acute Avian Oral Toxicity – Quail/Duck	CITE-ALL	See Attachment	PAY	
71-2(a)	Avian Dietary Toxicity – Quail/Duck	CITE-ALL	See Attachment	PAY	
71-2(b)	Acute Avian Dietary - Duck				Waived ¹
72-1(a)	Freshwater Fish Toxicity - Bluegill				Waived ¹
72-1(c)	Fish Toxicity – Rainbow Trout	CITE-ALL	See Attachment	PAY	
72-2(a)	Freshwater Invertebrate Toxicity	CITE-ALL	See Attachment	PAY	
81-1	Acute Oral Toxicity				Waived ¹
81-2	Acute Dermal Toxicity				Waived ¹
81-3	Acute Inhalation Toxicity				Waived ¹
81-4	Primary Eye Irritation				Waived ¹
81-5	Primary Dermal Irritation				Waived ¹
81-6	Skin Sensitization				Waived ¹
161-1 to 165-5	Environmental Fate				Waived ¹
	Efficacy	00064360 00083078 00084988 00085596 00128322 00128531 00130071 00133673 00134077 00134078 00161129 00162157 44255901	Ionics Inc. (Co. # 35900)	OWN	

FOOTNOTE:

1. These data requirements were waived under the provisions of the Silver RED (June 1993).

Signature

Name and Title:

Christina M. Swick, Agent for Ionics, Inc.

Date

April 3, 2002

DATA MATRIX ATTACHMENT

Product Name: General Ionics Model IQ0820B Bacteriostatic Water Conditioner
EPA Reg. No.: 35900-3
Date of Data Matrix: April 3, 2002
Chemical: Silver, A.I. Number 72501

COMPANY# 008588 RG DEN FILTER COMPANY INC
* DATA TYPES * 4662 LANKERSHIN BLVD.
EU AT EC FW EF OT NORTH HOLLYWOOD CA
XX 91602

COMPANY# 010324 MASON CHEMICAL CO
* DATA TYPES * 721 W ALGONQUIN RD
EU AT EC FW EF OT ARLINGTON HEIGHTS IL
XX XX 60005

COMPANY# 014944 ATEK INDUSTRIES INC
* DATA TYPES * 5355 MCCONNELL AVE
EU AT EC FW EF OT LOS ANGELES CA
XX 90066

COMPANY# 018869 KING-HOLLER INT
* DATA TYPES * 606 WILSHIRE BLVD SUITE 501
EU AT EC FW EF OT SANTA MONI CA
XX XX 90401

COMPANY# 035968 CONSUMER ECOLOGY PROD., INC
* DATA TYPES * 101 S. W. FIFTH COURT
EU AT EC FW EF OT POMPANO BEACH FL
XX 33060

COMPANY# 037370 NATIONAL SAFETY ASSOCIATES, INC.
* DATA TYPES * 4260 EAST RAINES ROAD
EU AT EC FW EF OT MEMPHIS TN
XX XX 38118

COMPANY# 037664 TELEDYNE WATER PIK
* DATA TYPES * 1730 EAST PROSPECT ST
EU AT EC FW EF OT FORT COLLINS CO
XX XX XX 80521

COMPANY# 037756 WATER SAFE PRODUCTS, INC
* DATA TYPES * 8337 NIEMAN ROAD
EU AT EC FW EF OT LEXEXA KS
XX 66214

COMPANY# 038058 PUROLATOR CA. PUROLATOR, INC.
* DATA TYPES * 950 RANCHO CONEJO BLVD.
EU AT EC FW EF OT NEWBURY PARK CA
XX 91320

COMPANY# 038688 C. H. DEXTER DIVISION
* DATA TYPES * ONE ELM STREET
EU AT EC FW EF OT WINDSOR LOCKS CT
XX XX 06096

COMPANY# 039444 SUUNTO USA INC
AGENT FOR: KATADYN PRODUCTS, INC.
* DATA TYPES * 2151 LAS PALMAS DRIVE, SUITE F
EU AT EC FW EF OT CARLSBAD CA
XX XX 92009

DATA MATRIX ATTACHMENT

Product Name: General Ionics Model IQ0820B Bacteriostatic Water Conditioner
EPA Reg. No.: 35900-3
Date of Data Matrix: April 3, 2002
Chemical: Silver, A.I. Number 72501

COMPANY# 039938 NORTH AMERICAN SYSTEMS, INC.
* DATA TYPES * 24700 MILES ROAD
EU AT EC FW EF OT BEDFORD HTS. OH
XX XX 44146

COMPANY# 067712 ZODIAC POOL CARE, INC.
* DATA TYPES * 3420 NORTHWEST 53RD STREET
EU AT EC FW EF OT FT. LAUNDERDALE FL
XX XX 33309

COMPANY# 071227 AGION TECHNOLOGIES LLC
AGENT FOR: SINANEN COMPANY, LTD.
* DATA TYPES * 60 AUDUBON ROAD
EU AT EC FW EF OT WAKEFIELD MA
XX XX 01880

COMPANY# 071661 SRA INTERNATIONAL, INC.
AGENT FOR: INTELLIGENT BIOCIDES LLC
* DATA TYPES * 1850 M STREET, N.W., SUITE 290
EU AT EC FW EF OT WASHINGTON DC
XX XX XX 20036

COMPANY# 072977 HENRY JACOBY, REGULATORY CONSULTANT
AGENT FOR: ETI H2O, INC.
* DATA TYPES * 6709 ILEX COURT
EU AT EC FW EF OT NEW MARKET MD
XX XX 21774

COMPANY# 073148 SCIENTIFIC & REGULATORY CONSULTANTS
AGENT FOR: ISHIZUKA GLASS CO., LTD.
* DATA TYPES * 102 1/2 SOUTH CHAUNCEY STREET
EU AT EC FW EF OT COLUMBIA CITY IN
XX XX 46725

COMPANY# 073499 AMERICAN BIOTECH LABS
* DATA TYPES * 70 WEST CANYON CREST RD., SUITE D
EU AT EC FW EF OT ALPINE UT
XX 84004

COMPANY# 073667 CHEMREG INTERNATIONAL, LLC
AGENT FOR: APYRON TECHNOLOGIES, INC.
* DATA TYPES * 2239-H TACKETS MILL DRIVE
EU AT EC FW EF OT LAKE RIDGE VA
XX 22192



DATA MATRIX

Page 1 of 1

Product

General Ionics Model IO820B Bacteriostatic Water Conditioner

Ingredient(s): Silver (A.I.# 7250I)

Signature

Name and Title:

Christina M. Swick, Agent for Ionics, Inc.

	Date
--	-------------

April 3, 2002

DATA MATRIX ATTACHMENT

Product Name: General Ionics Model IQ0820B Bacteriostatic Water Conditioner
EPA Reg. No.: 35900-3
Date of Data Matrix: April 3, 2002
Chemical: Silver, A.I. Number 72501

COMPANY# 008588 RG DEN FILTER COMPANY INC
* DATA TYPES * 4662 LANKERSHIN BLVD.
EU AT EC FW EF OT NORTH HOLLYWOOD CA
XX 91602

COMPANY# 010324 MASON CHEMICAL CO
* DATA TYPES * 721 W ALGONQUIN RD
EU AT EC FW EF OT ARLINGTON HEIGHTS IL
XX XX 60005

COMPANY# 014944 ATEK INDUSTRIES INC
* DATA TYPES * 5355 MCCONNELL AVE
EU AT EC FW EF OT LOS ANGELES CA
XX 90066

COMPANY# 018869 KING-HOLLER INT
* DATA TYPES * 606 WILSHIRE BLVD SUITE 501
EU AT EC FW EF OT SANTA MONI CA
XX XX 90401

COMPANY# 035968 CONSUMER ECOLOGY PROD., INC
* DATA TYPES * 101 S. W. FIFTH COURT
EU AT EC FW EF OT POMPANO BEACH FL
XX 33060

COMPANY# 037370 NATIONAL SAFETY ASSOCIATES, INC.
* DATA TYPES * 4260 EAST RAINES ROAD
EU AT EC FW EF OT MEMPHIS TN
XX XX 38118

COMPANY# 037664 TELEDYNE WATER PIK
* DATA TYPES * 1730 EAST PROSPECT ST
EU AT EC FW EF OT FORT COLLINS CO
XX XX 80521

COMPANY# 037756 WATER SAFE PRODUCTS, INC
* DATA TYPES * 8337 NIEMAN ROAD
EU AT EC FW EF OT LEXEXA KS
XX 66214

COMPANY# 038058 PUROLATOR CA. PUROLATOR, INC.
* DATA TYPES * 950 RANCHO CONEJO BLVD.
EU AT EC FW EF OT NEWBURY PARK CA
XX 91320

COMPANY# 038688 C. H. DEXTER DIVISION
* DATA TYPES * ONE ELM STREET
EU AT EC FW EF OT WINDSOR LOCKS CT
XX XX 06096

COMPANY# 039444 SUUNTO USA INC
AGENT FOR: KATADYN PRODUCTS, INC.
* DATA TYPES * 2151 LAS PALMAS DRIVE, SUITE F
EU AT EC FW EF OT CARLSBAD CA
XX XX 92009

DATA MATRIX ATTACHMENT

Product Name: **General Ionics Model IQ0820B Bacteriostatic Water Conditioner**
EPA Reg. No.: **35900-3**
Date of Data Matrix: **April 3, 2002**
Chemical: **Silver, A.I. Number 72501**

COMPANY# 039938 NORTH AMERICAN SYSTEMS, INC.
* DATA TYPES * 24700 MILES ROAD
EU AT EC FW EF OT BEDFORD HTS. OH
XX XX 44146

COMPANY# 067712 ZODIAC POOL CARE, INC.
* DATA TYPES * 3420 NORTHWEST 53RD STREET
EU AT EC FW EF OT FT. LAUNDERDALE FL
XX XX 33309

COMPANY# 071227 AGION TECHNOLOGIES LLC
AGENT FOR: SINANEN COMPANY, LTD.
* DATA TYPES * 60 AUDUBON ROAD
EU AT EC FW EF OT WAKEFIELD MA
XX XX 01880

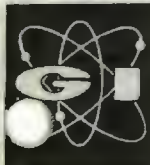
COMPANY# 071661 SRA INTERNATIONAL, INC.
AGENT FOR: INTELLIGENT BIOCIDES LLC
* DATA TYPES * 1850 M STREET, N.W., SUITE 290
EU AT EC FW EF OT WASHINGTON DC
XX XX XX 20036

COMPANY# 072977 HENRY JACOBY, REGULATORY CONSULTANT
AGENT FOR: ETI H2O, INC.
* DATA TYPES * 6709 ILEX COURT
EU AT EC FW EF OT NEW MARKET MD
XX XX 21774

COMPANY# 073148 SCIENTIFIC & REGULATORY CONSULTANTS
AGENT FOR: ISHIZUKA GLASS CO., LTD.
* DATA TYPES * 102 1/2 SOUTH CHAUNCEY STREET
EU AT EC FW EF OT COLUMBIA CITY IN
XX XX 46725

COMPANY# 073499 AMERICAN BIOTECH LABS
* DATA TYPES * 70 WEST CANYON CREST RD., SUITE D
EU AT EC FW EF OT ALPINE UT
XX 84004

COMPANY# 073667 CHEMREG INTERNATIONAL, LLC
AGENT FOR: APYRON TECHNOLOGIES, INC.
* DATA TYPES * 2239-H TACKETS MILL DRIVE
EU AT EC FW EF OT LAKE RIDGE VA
XX 22192



GENERAL IONICS BACTERIOSTATIC WATER CONDITIONERS

ACCEPTED
with COMMENTS
in EPA Letter Dated:

MAR 13 1995

Under the Federal Insecticide,
Fungicide, and Rodenticide Act as
amended, the pesticide
EPA Reg. No.

35900-3

Q. First, what is a Bacteriostatic Water Conditioner?

A. A Bacteriostatic Water Conditioner is one which not only softens municipally treated water, but also inhibits the growth of bacteria within the ion exchange softening filter medium.

Q. Is there a need to inhibit the growth of bacteria in potable (drinking) water?

A. Since potable water can, by law, contain a number of harmless bacteria indigenous to municipally treated water, the potential for a build-up or growth of these bacteria trapped within the ion exchange softening filter medium does exist.

Q. Why is there a build-up of bacteria in a water conditioning unit?

A. The low level of bacteria in the municipally treated water along with organic compounds normally present in a water supply become trapped in the filter media bed. After a period of time the filter bed contains a considerable number of bacteria and, in the presence of the organic compounds which become a source of nutrients for bacteria, the filter then becomes a breeding place for bacterial growth.

Q. What is in the Bacteriostatic Water Conditioner that inhibits the growth of bacteria within the filter medium?

A. The inhibiting agent is HYgene—an Environmental Protection Agency Registered Bacteriostatic Water Filter Medium. It is the exclusive property of Ionics, Incorporated. Technically, HYgene is a silver-impregnated granular activated carbon. A layer of HYgene is placed on top (water inlet side) of the ion exchange softening resin inside the water conditioner. The top section of the filter bed is the area where excessive bacteria growth usually takes place, especially during non-flow periods when the water is not in use, such as overnight or when the unit is unused during vacation periods. Bacterial level in ion exchange resins is a transitory phenomenon which is markedly decreased after a period of flow or a regeneration cycle.

Q. What is the expected life of the HYgene Bacteriostatic Water Filter medium contained in the General Ionics Water Conditioning Unit?

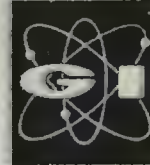
A. The HYgene medium should be replaced in accordance with water conditioner model size as follows:

Softening Capacity	Tank Diameter	HYgene Content	Bacteriostatic Medium Life	
			Gallons	Family of 4
20 Kg.	8 inch	2 lb.	75,000	1 year
40 Kg.	12 inch	4 lb.	150,000	2 years

Q. Are there any Environmental Protection Agency restrictions that I should know?

A. There are no restrictions or precautions for your concern. The EPA has, however, registered the General Ionics Bacteriostatic Water Conditioners for use on treated municipally supplied tap water, which precludes its use on well water.

**QUESTIONS
&
ANSWERS
ABOUT**



**GENERAL IONICS
BACTERIOSTATIC
WATER
CONDITIONERS**



IONICS

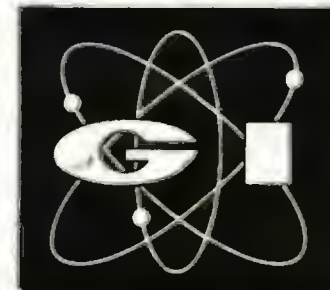
IONICS, INCORPORATED

P.O. BOX 99 • BRIDGEVILLE, PA. 15017
INTERNATIONAL WATER CONSULTANTS AND
EQUIPMENT MANUFACTURERS • MEMBER WATER
QUALITY ASSOCIATION

Litho in U.S.A. GIB-783

HOMEOWNER'S MANUAL

GENERAL IONICS WATER CONDITIONER Model IQ and Model EE



IONICS

IONICS, INCORPORATED

P.O. Box 99
Bridgeville, PA 15017

INTERNATIONAL WATER CONSULTANTS AND
EQUIPMENT MANUFACTURERS • MEMBER
WATER QUALITY ASSOCIATION

IONICS, INCORPORATED



IMPORTANT

This booklet contains your Owner Limited Warranty Card. Be sure that it is filled in and mailed to the factory within two weeks of installation. Failure to do so will result in voiding the warranty.

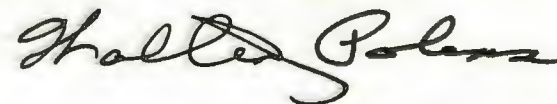
Your General Ionics Dealer is...

Congratulations

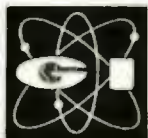
Ionics, Incorporated welcomes you to a new, carefree way of life with conditioned water. You can take pride and satisfaction knowing that you own the very best.

We are proud that you have selected the General Ionics deluxe quality Water Conditioner for your home. Your sound judgment is supported by the wide acceptance received for these units throughout the world. More and more quality conscious homeowners are purchasing General Ionics Water Conditioning equipment because of its superior performance and its premium quality workmanship.

The following pages of this booklet will introduce you to your new General Ionics Water Conditioner by explaining operation, care and maintenance. In addition, the booklet provides recommendations for getting the very best performance from your unit as well as answers to commonly asked questions.



Vice President
Household Water Conditioning
Ionics, Incorporated



General Information

Your General Ionics Water Conditioner is completely automatic. It will provide an abundance of conditioned water with just an occasional addition of salt to the brine tank when the salt reaches the "add salt" level. Your unit was thoroughly tested at the factory before shipping, and again at the time of installation. The automatic timer is set to "regenerate" your water conditioner at night while you are sleeping. From experience, this is the best time because your water demand is lowest then and regeneration will not interfere with baths, washing clothes, etc. However, unconditioned water is available from all faucets during the regeneration cycle. With the General Ionics Water Conditioner you are never without water.

It is a good idea to wipe the unit occasionally and then apply a good coat of wax. This procedure will keep your water conditioner looking bright and clean for a lifetime.

In case some problem should arise, you can manually by-pass the unit by throwing one lever (see illustration on page 5). Then call your authorized General Ionics dealer. He has been trained in all phases of maintenance and repair work and will have the unit back in operation quickly. If there is not a General Ionics dealer in your vicinity, then contact another reliable water conditioning firm. Failing that, please write directly to the factory: Ionics, Incorporated, P.O. Box 99, Bridgeville, Pennsylvania 15017, Attention: Service Department.

NOTE: Whenever you correspond with the factory, be sure to include the model and serial number written on the inside back cover of this booklet. Explain the problem as best you can. With this information factory technicians can handle the problem promptly with little chance of error.

Regeneration

Your General Ionics Water Conditioning unit consists of a tank filled with a premeasured amount of a special mineral called S-759, formulated especially for General Ionics equipment. On top of the tank is the control valve/timer, which works on the same principle as an electric clock. Alongside the unit is a storage tank which holds the salt and brine for the regeneration cycle.

Regeneration means recharging or recleaning the special S-759 mineral. It is important to know that the entire cycle is automatic and you will have nothing to do with it. The following steps are for your own enlightenment... and to demonstrate the thoroughness of the automatic cycle: 1. Backwashing, which reverses the action of the water, throws off the sediment (called turbidity) that has been filtered out of the water, and flushes it down the drain. 2. Salt, as brine, is injected into the unit to clean and revitalize the S-759 mineral. (The amount of salt used is controlled by a float valve, which operates the same as the float in the water tank of your toilet.) 3. Slow rinse. 4. Fast rinse. 5. Valve automatically returns to the service position to again supply you with good, conditioned water.

What Salt To Use

Salt is your water conditioner's fuel. Using the right fuel is as important here as it is to get the best performance from your car. It is strongly recommended to use only nugget or pellet type salt in your water conditioner. This type of salt is pure and free of undesirable insolubles. Nugget or pellet type water conditioner salt is available from your General Ionics dealer.

NOTE: Common rock salt is NOT recommended because much of it contains insolubles. The continued use of common rock salt will necessitate more frequent cleaning of the brine tank, or worse, it may cause a malfunction of the valving. However, specially processed water conditioner rock salt, as handled by your local dealer, may be used.

ACCEPTED
with COMMENTS
EPA Letter Dated:

MAR 13 1995

U.S. Federal Ins-
pection and Regula-
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When To Add Salt

The brine tank has a capacity up to 250 lbs. of nugget or pellet salt. You can add salt whenever it is most convenient for you, but it is important to replenish the supply before the pellets reach the "add salt" level indicated by the label on the salt storage tank.

Bridging Or Caking

The salt platform in your brine tank has been engineered to eliminate salt bridging or caking. However, under certain atmospheric conditions these circumstances can occur and will prevent the salt from coming in contact with the water level. When your water seems to be hard, check the salt in the storage tank. If it appears to be bridging or caking, break it up with a short wooden stick. In doing so, be careful not to probe the full depth of the brine tank because you may damage the salt platform.

Bacteriostatic — An Ionics Exclusive

If your General Ionics Water Conditioner is an Environmental Protection Agency (EPA) Registered Bacteriostatic model, you have two unique added features. First, this unit inhibits the growth of bacteria within the S-759 ion exchange filter media bed. Second, it reduces and in many cases completely eliminates organic tastes, odors and colors from the water.

Inside the Bacteriostatic model water conditioner a layer of HYgene® silver-impregnated activated carbon (EPA-Registered Bacteriostatic Water Filter Media) is placed on top of the S-759 mineral. The silver acts as the inhibiting agent while the activated carbon adsorbs objectionable tastes, odors and colors.

IT IS A VIOLATION OF FEDERAL LAW to use this product in a manner inconsistent with its labeling. Only use EPA Registered Hygene silver-impregnated Carbon replacement media in this unit. Use of any media material other than Hygene silver carbon manufactured by Ionics, Incorporated is a violation of the improper operation of the unit, and voids the manufacturer's warranty. For your protection, do not accept a replacement media unless it is factory-sealed with both the tape and label reading "Hygene" manufactured by Ionics, Incorporated.

EPA has restricted the Bacteriostatic models for use only on treated municipally supplied tap water, which precludes its use on well water.



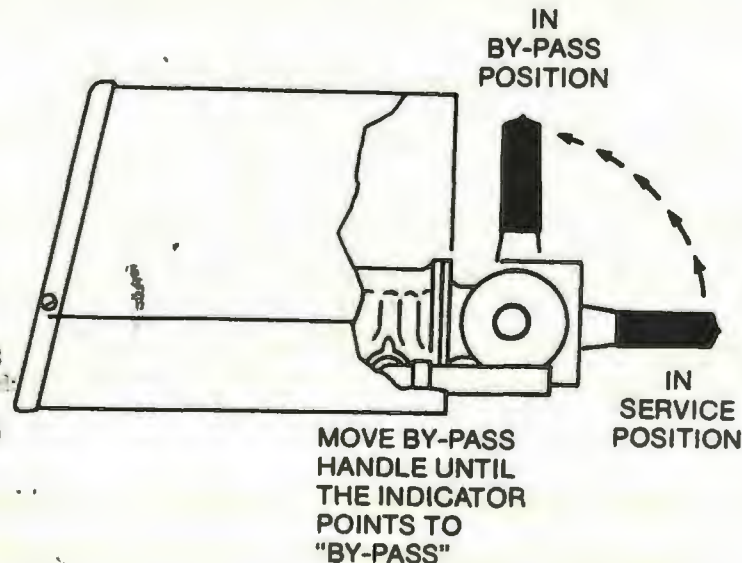
By-Pass Instruction

In case any problem should occur that cannot be immediately resolved, it is recommended to manually by-pass the unit as shown and call your authorized General Ionics dealer.

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MAR 13 1995

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LIFE EXPECTANCY OF HYGENE BACTERIOSTATIC MEDIA

Model Nos. (EE or IQ)	Tank Diameter	HYgene Content	Bacteriostatic Medium Life Gallons	Family of 4
0820-B	8"	2 lb.	75,000	1 year
1240-B	11"	4 lb.	150,000	2 years

It is suggested that a water meter reading be noted at time of installation. Add to that reading the expected gallonage life of the Bacteriostatic medium from the above chart. Record what the water meter reading will be when replacement should be made.

Water meter reading at time of installation _____ Gallons

Expected life of Media (from above chart) + _____ Gallons

Water meter reading, media replacement _____ Gallons



Model IQ Special Features

Directions For Use

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

For use on cold water only.

Meter-Controlled Regeneration

The Model IQ control minimizes salt usage and water waste by accurately monitoring the conditioned water and then initiating a regeneration only when the S-759 mineral is near exhaustion. Six-cycle downflow brining assures accurate salting while the adjustable time regeneration program uses the minimum amount of water required per cycle.

In service a mechanical meter accurately monitors water usage. This feature eliminates the costly wasted capacity due to premature regenerations.

Vacation Periods

There is no need to be concerned about disconnections or adjustments on your Model IQ Water Conditioner before leaving your home for long periods of time. When no water is being used, the "brain" will simply remain idle for that period of time and be ready to monitor water usage when you return home.

High Usage Demand/Weekend Guests

The Model IQ Water Conditioner's "brain" will automatically recognize the increase in water usage and regenerate before running out of conditioner water. Unpredictable water demand is never a problem with the General Ionics Model IQ.

How To Set The Time Of Day

If you should have a power failure or want to adjust for Daylight Savings Time, follow these instructions:

Press and hold in the red button to disengage the drive gear.

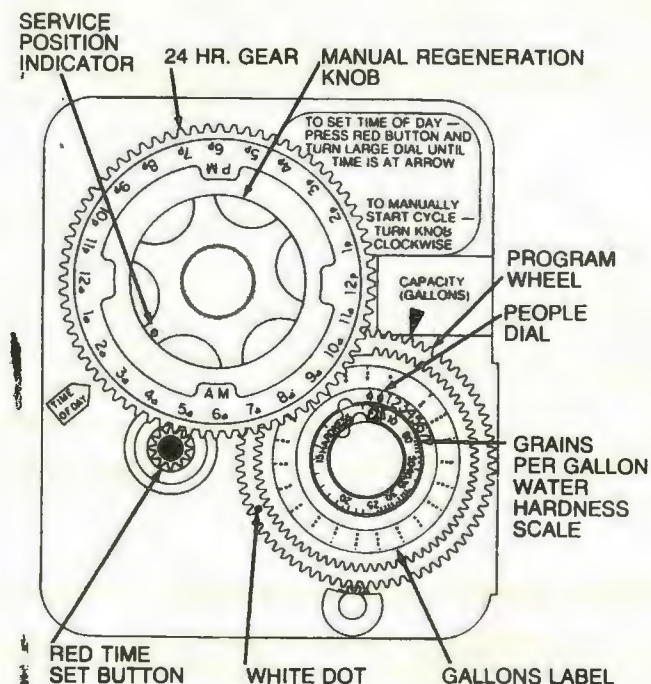
Turn the large gear until the actual time of day is opposite the time of day pointer.

Release the red button to engage the drive gear.

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with COMMENTS
in EPA Letter Dated
MAR 13 1995

Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
this device is a pesticide
registered under EPA Reg. No.

35900-3



How To Manually Regenerate Your Water Conditioner At Any Time

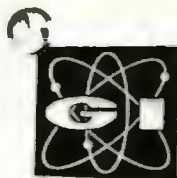
Turn the manual regeneration knob clockwise.

This slight movement of the manual regeneration knob engages the program wheel and starts the regeneration program.

The black center knob will make one revolution in the following three hours and stop in the position shown in the drawing.

Even though it takes three hours for this center knob to complete one revolution, the regeneration cycle of your unit might be set for only one-half of this time.

In any event, conditioned water may be drawn after rinse water stops flowing from the water conditioner drain line.



Model EE Special Features

Directions For Use

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

For use on cold water only.

Energy Efficient Control

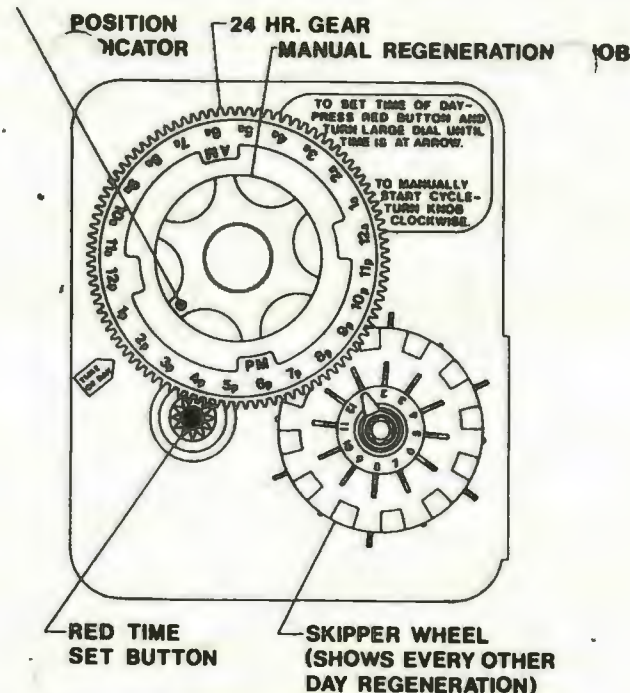
This fully automatic six-cycle valve with 12-day timer schedules regenerations at preset intervals. The day and the hour for regeneration, as well as the salt dosage, have been set at the time of installation by the installer. These settings have been carefully calculated according to your family needs and to get the maximum recovery of the resin while minimizing water usage. **Do Not Change These Settings Without First Consulting Your Dealer.**

Vacation Periods

Why allow your water conditioner to continue regenerating while you are on vacation? It would be a waste of salt to recharge an already charged mineral bed. With your Energy Efficient General Ionics Model EE Water Conditioner, vacation time has been taken into account. Simply move the by-pass valve lever (see illustration on page 5 of this manual) until the indicator points to "by-pass". By doing so, the unit will continue to go through the preset regeneration cycles, but actually it will not regenerate. When you return home, move the by-pass valve lever back to the "service" position and you will again have conditioned water as before.

High Usage Demand/Weekend Guests

As mentioned previously, your General Ionics Model EE unit is set for your own needs. Higher than normal usage such as weekend guests will naturally place a greater demand for conditioned water on the unit. The method for manually regenerating the unit is covered on page 9. This "extra" regeneration will not interfere with the regular programmed cycle.



How To Set The Time Of Day

If you should have a power failure or want to adjust for Daylight Savings Time, follow these instructions:

Press and hold in the red button to disengage the drive gear.

Turn the large gear until the actual time of day is opposite the time of day pointer.

Release the red button to engage the drive gear.

How To Manually Regenerate Your Water Conditioner At Any Time

Turn the manual regeneration knob clockwise.

This slight movement of the manual regeneration knob engages the program wheel and starts the regeneration program.

The black center knob will make one revolution in the following three hours and stop in the position shown in the drawing.

Even though it takes three hours for this center knob to complete one revolution, the regeneration cycle of your unit might be set for only one-half of this time.

In any event, conditioned water may be drawn after the water stops flowing from the water conditioner drain line.

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Questions And Answers

Q. What is water conditioning?

A. Water conditioning is that branch of engineering that determines the chemical characteristics of a tap water supply, as it enters your home, and treats these characteristics so as to provide water more suitable and economical for household use.

Q. Why is it essential to improve water quality?

A. Beyond being an absolute necessity of life, water is an outstanding cleaning agent. The trouble is that nature does a lot of things with water long before you have a chance to use it in your laundry or at your kitchen sink. You get it, as it were, second hand. Therefore, improving your water quality by water conditioning is just as essential as any other home appliance.

Q. Does the conditioned water have a "different" taste?

A. Taste is difficult to define as no two people have the same sense of taste. A water conditioner will remove certain minerals and turbidity from the water, giving you a cleaner, better tasting water.

Q. Will conditioned water give a cleaner, brighter wash?

A. Yes. For best results, you should use the proper amount of laundering agent. Keep in mind a 60 to 80% soap saving can be achieved with conditioned water. Learn to use less laundering agent because none of the cleansing compound will be wasted as in hard water cleaning. The amount of laundering agent you use depends on: (1) its effectiveness, (2) the volume and temperature of water, (3) the size of the wash load, and (4) the type and amount of dirt and grime.

Q. What effect will conditioned water have on plumbing?

A. Before the water was conditioned, the hard water caused a scale build-up in the hot water pipes and water heater. Scale acts as an insulating material. In the water heater, scale reduces heat transmission, wastes fuel and often causes heating coil and tube failure. The installation of a water conditioner not only prevents further scale formation but will gradually remove previously formed scale deposits. A recent study indicates that softened water offers a saving of 23% in energy cost in the operation of a hot water heater.

Q. Are the minerals which a conditioner removes from hard water essential to health?

A. No. The quantity of minerals found in hard water are not essential to good health.

Q. Is the sodium in softened water harmful to people on restrictive diets?

A. Much depends on the strictness of the diet itself.

When the patient is on an extremely restrictive diet, he should drink neither hard nor softened water. Under these conditions he should have demineralized water, distilled water, or water known to be free of sodium for drinking and for the cooking of foods. Such patients are commonly hospitalized.

In establishing a salt-free diet for patients, physicians should not overlook the fact that even hard water may contain appreciable amounts of sodium. To determine the amount a complete analysis of the water is necessary.

Q. How much sodium is added to softened water?

A. Each grain per gallon (GPG) hardness removed adds 7.875 milligrams (mg) of sodium to a liter of water, which is approximately one quart. The average daily sodium intake of an adult individual is 3,000 to 4,000 milligrams and the average fluid intake is 1.6 to 2.0 liters per day. A liter is slightly more than four 8-ounce glasses of water. Two liters per day or 8.4 eight-ounce glasses of water amounts to a total sodium intake from a source of softened 8 GPG water of 125.16 milligrams. This is approximately 3% of the average daily sodium intake.

There is another way to answer this question, and that depends on the hardness of your raw water. The following table shows the additional amount of sodium consumed by drinking ONE quart of softened water.

Initial Water Hardness	Sodium Added By Softening
5 Grains/Gallon	37.5 Milligrams/Quart
10 Grains/Gallon	75.0 Milligrams/Quart
20 Grains/Gallon	150.0 Milligrams/Quart
40 Grains/Gallon	300.0 Milligrams/Quart

Q. How does this sodium content of conditioned water compare to sodium found in common foods?

The data in the following table demonstrate the usual range of sodium in common foods.

Food	Amount	Milligrams Of Sodium
Milk	2 Cups	226
Bread	2 Slices	322
Corn Flakes	1 Ounce	260
Tomato Juice	4 Ounces	504
Chili	1 Cup	1,194
Tomato Soup	1 Cup	932
Beef Broth	1 Cup	1,152
Frankfurter	1 Medium	610
Hamburger (Fast Food)	1/4 Pound	1,510
Catsup	1 Tablespoon	204
Canned Baked Beans	3/4 Cup	1,130
Canned Asparagus	1/2 Cup	560
Frozen Peas	1/2 Cup	295
Cottage Cheese	4 Ounces	457
Parmesan Cheese	1 Ounce	528
Pretzels	1/4 Pound	1,925

It is important to note that about 2/3 of the daily water intake of any individual is through food and only about 1/3 from water itself.

General Ionics Water Conditioner LIMITED WARRANTY

This should be kept in a safe place by the owner.

GENERAL CONDITIONS

Ionics, Incorporated, Bridgeville, Pa., warrants that the General Ionics Water Conditioner to which this limited warranty applies is free from defects in material and workmanship. The attached limited warranty agreement card must be filled out, mailed to, and received by Ionics, Incorporated, within two (2) weeks of the date of installation of the equipment for this limited warranty to be effective.

This limited warranty is extended directly by the manufacturer to the owner, and is the sole warranty applicable. Any other warranties or guarantees, oral or written, expressed or implied, are not recognized.

LIMITED LIFETIME WARRANTY ON MINERAL TANK

This General Ionics Water Conditioning unit carries a limited warranty on the mineral tank. Any such mineral tank that becomes unusable because of leakage, corrosion, or rupture will be replaced or repaired at the option of Ionics, Incorporated. The defective tank must be returned to Ionics, Incorporated, transportation prepaid, within 30 days from date of failure for this limited warranty to be effective.

ELECTRICAL PARTS — LIMITED WARRANTY

Electrical components are warranted for a period of one (1) year of date of installation, provided the defective part is returned, prepaid to Ionics, Incorporated. Valve and/or control valve parts are warranted for a period of five (5) years from date of installation. Any such components found to be defective will be replaced or repaired, within five (5) years of date of installation, provided the defective part is returned, prepaid, to Ionics, Incorporated.

SALT STORAGE TANK — LIMITED WARRANTY

There is a five (5) year warranty on salt storage tank. Any such storage tank that becomes unusable because of leakage or corrosion will be replaced or repaired at the option of Ionics, Incorporated. The original tank must be returned to Ionics, Incorporated, transportation prepaid, within 30 days from date of failure for this limited warranty to be effective.

Salt Storage Tank components are warranted for a period of one (1) year of date of installation, provided the defective parts are returned prepaid to Ionics, Incorporated.

ION EXCHANGE RESIN — LIMITED WARRANTY

The S-759 high capacity ion exchange resin housed in the mineral tank carries a limited warranty of one (1) year. A resin sample must be sent to Ionics, Incorporated for testing prior to its replacement under warranty. If the resin is found to be incapable of softening the water because of a flaw in its manufacture, it will be replaced. Warranty does not apply to resin which has been frozen, has become fouled by iron due to improper maintenance, or is found to be ineffective due to any other outside form of neglect.

BACTERIOSTATIC MODELS — SILVER CARBON REPLACEMENT

IT IS A VIOLATION OF FEDERAL LAW to replace the EPA-registered silver-impregnated carbon media in any Ionics bacteriostatic unit with anything other than HYgene® silver carbon manufactured by Ionics, Incorporated. The installation of any other media will void this warranty. For your protection, do not accept a replacement media unless it is factory-sealed with both the tape and label reading "HYgene®" manufactured by Ionics, Incorporated.

EXTENT OF LIMITED WARRANTY

Under terms of this limited warranty, all tanks are replaced or repaired by Ionics, Incorporated on the basis of F.O.B. manufacturer's plant. Transportation, labor, installation, and service costs are to the customer's account and are not covered by this limited warranty.

LIMITATIONS OF WARRANTY

This limited warranty shall be effective only if the Water Conditioner covered by the limited warranty is properly installed in accordance with installation and operating instructions furnished with the equipment by Ionics, Incorporated, and in accordance with the local plumbing codes and ordinances.

This limited warranty shall be void if any part of the Water Conditioner has been subjected to accident, alteration, abuse, neglect or freezing.

This limited warranty shall not be assignable by the original purchaser and applies only to the original equipment.

Model Number _____ Tank Number _____

Date Installed _____

Dealer _____

Address _____

Telephone _____



IONICS

IONICS, INCORPORATED

P.O. Box 99 • Bridgeville, PA 15017

GENERAL IONICS Model IQ Bacteriostatic

METER-CONTROLLED FULLY AUTOMATIC STAINLESS STEEL WATER CONDITIONER

General Ionics presents the first Bacteriostatic Water Conditioner that not only softens municipally-treated water but also inhibits the growth of bacteria within the filter media bed. Additionally, the Model IQ — the unit with a brain — features state-of-the-art Metered Regeneration Control that provides salt savings of up to 40% over conventional timers.

The Model IQ Control monitors the conditioned water you use, and then initiates a regeneration cycle only when the ion exchange mineral is near exhaustion.

With the IQ Regeneration Control there is no need for "vacation" or

"guest" switches. This "brain" automatically meters any increase or decrease in water usage, and therefore regenerates only when necessary. As a result, you realize savings three ways: (1) salt consumption, (2) water usage, and (3) sewage taxes.

The General Ionics Model IQ Bacteriostatic Water Conditioner gives you absolutely carefree convenience and reliable performance, plus the unique polishing of your water with the silver-impregnated activated carbon that removes objectionable tastes and odors.

The Water Conditioner with a brain gives you all these advantages:

- Bacteriostatic feature inhibits

growth of bacteria within filter media bed while removing odors and tastes

- Meter-controlled regeneration for big savings
- Corrosion-resistant 6-cycle bronze control valve for trouble-free operation
- Beautifully polished chrome/nickel stainless steel mineral tank with a limited lifetime warranty
- High-density polypropylene brine tank with a 5-year limited warranty
- High-capacity S-759 resin for superior hardness removal as well as high recovery rates during regeneration

GENERAL IONICS — THE MAGIC NAME IN WATER CONDITIONING SINCE 1947

SPECIFICATION	MODEL NUMBER	
	IQ 0820-B	IQ 1240-B
Capacity (Grains)	20,000	40,000
Tank Size — Diameter by Height (Inches)	8 x 51	12 x 59
Salt Storage Capacity (Pounds)	250	200
Brine Tank Size — Diameter by Height (Inches)	18 x 30	18 x 30

ACCEPTED
with COMMENTS
in EPA Letter Dated:

MAR 13 1995



IONICS

IONICS, INCORPORATED

MANUFACTURERS OF GENERAL IONICS WATER CONDITIONERS
P.O. BOX 99 • BRIDGEVILLE, PA 15017 (PITTSBURGH DISTRICT)
INTERNATIONAL WATER CONSULTANTS AND EQUIPMENT MANUFACTURERS
MEMBER WATER QUALITY ASSOCIATION

Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
this product is
registered under EPA Reg. 140.

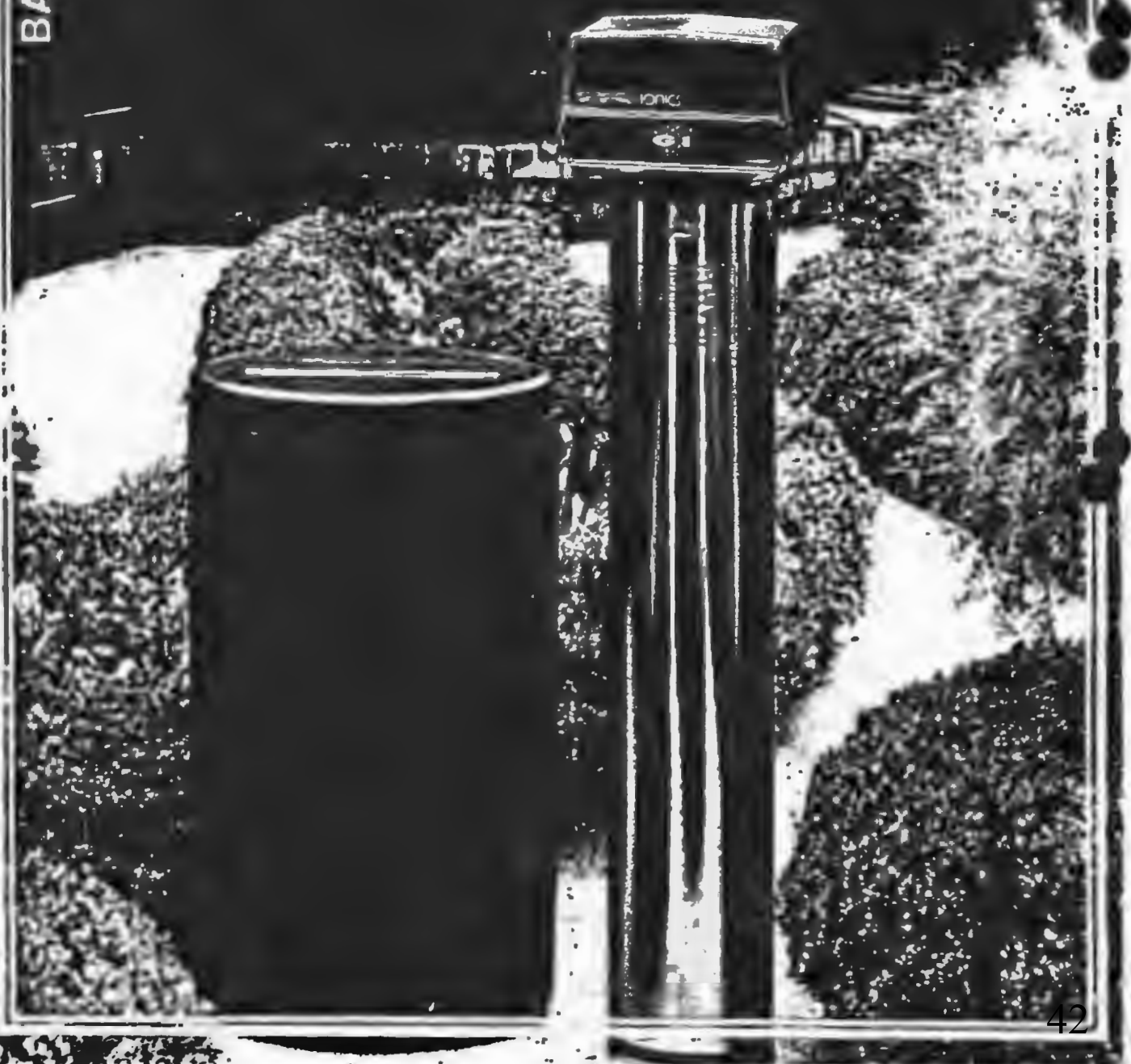
35900-3

E.P.A.

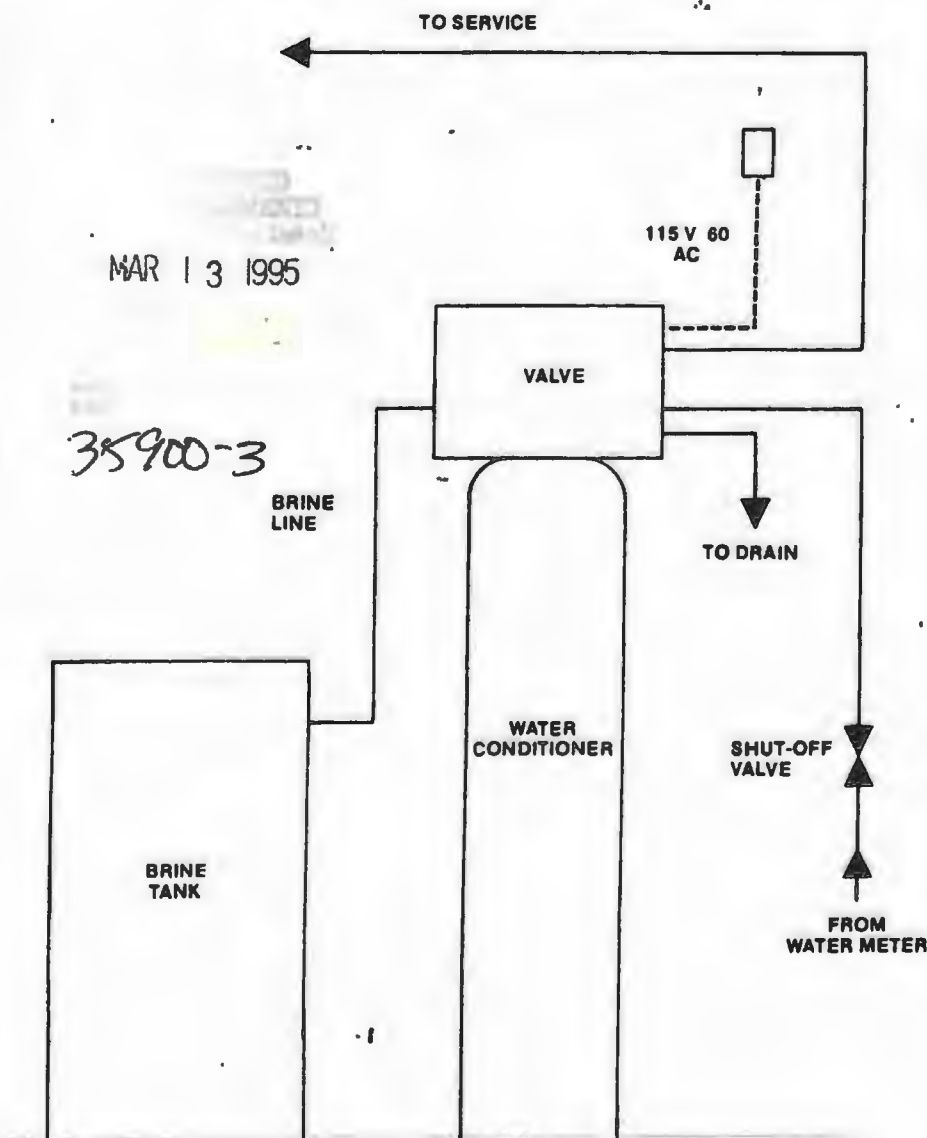
Environmental Protection Agency

REGISTERED
No. 35900-3
No. 35900-9

BACTERIOSTATIC



TYPICAL INSTALLATION FOR GENERAL IONICS BACTERIOSTATIC WATER CONDITIONER



INSTALLATION INSTRUCTIONS

GENERAL CLASSIFICATION: It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

For use on cold water only.

- 1. Select Location**—The location selected must be convenient for drain facilities, electrical outlet and convenient for servicing and adding salt.
- 2. Unpacking**—The Bacteriostatic Water Conditioner has been shipped complete in two cartons.
One carton contains the mineral tank which is preloaded with gravel bed, high capacity ion exchange resin and HYgene Bacteriostatic Water Filter Media. The control valve is mounted on top of this tank.
The second carton contains the salt storage tank and its components.
- 3. Turn main water supply off and drain system.**
- 4. Cut the main supply line and remove approximately 6 inches of existing plumbing.**
- 5. Remove control face plate and shroud. Place the mineral tank on the three plastic leveling legs and level.**
- 6. Move bypass lever so indicator points to bypass position. Connect:** the main inlet line to the opening in the valve marked "In". Connect the house service line to the opening marked "Outlet". Connect the drain line, providing a minimum of 2" air gap between end of pipe and drain.
- 7. Turn main supply on. Customer will have tap water while installation is being completed.**
- 8. Install salt storage tank. Assemble brine valve—connect brine line to control valve—add water to the salt storage tank. Add salt.**
- 9. (a)** Move bypass lever until indicator points to service position and then open a cold water faucet at kitchen sink or stationary tub to expel air. When there is a steady flow of water at the faucet, continue running for 15 minutes at flow rate indicated in Table I [Step 9 (a)].
(b) Press and hold the red button on the timer. This disengages the drive gear. Turn the black knob on the large cycle dial to backwash position to expell air compressed in the unit. When there is a steady flow of water at the drain, continue running for 10 minutes at flow rate indicated in Table I [Step 9 (b)].
(c) Again press and hold the red button to disengage the drive gear. Turn black knob and cycle dial to service position. Again open cold water tap at the kitchen sink or stationary tub. Continue running for 10 minutes at flow rate indicated in Table I [Step 9 (c)]. See note following Table I. Unit is now in service.

TABLE I
INSTALLATION FLOW RATES PRIOR TO
IN-SERVICE USE

Model Nos. (EE or IQ)	Step 9 (a) Service	Step 9 (b) Backwash	Step 9 (c) Service
0820-B	3 GPM/15 min.	1.5 GPM/10 min.	8 GPM/10 min.
1240-B	6 GPM/15 min.	3.0 GPM/10 min.	10.9 GPM/10 min.

NOTE: If flow rate in Step 9 (c) cannot be achieved due to low line pressure, run water at maximum flow until equivalent gallonage is reached.

TABLE II
LIFE EXPECTANCY OF HYGENE
BACTERIOSTATIC MEDIA

Model Nos. (EE or IQ)	Tank Diameter	HYgene Content	Bacteriostatic Medium Life Gallons	Family of 4
0820-B	8"	2 lb.	75,000	1 year
1240-B	11"	4 lb.	150,000	2 years

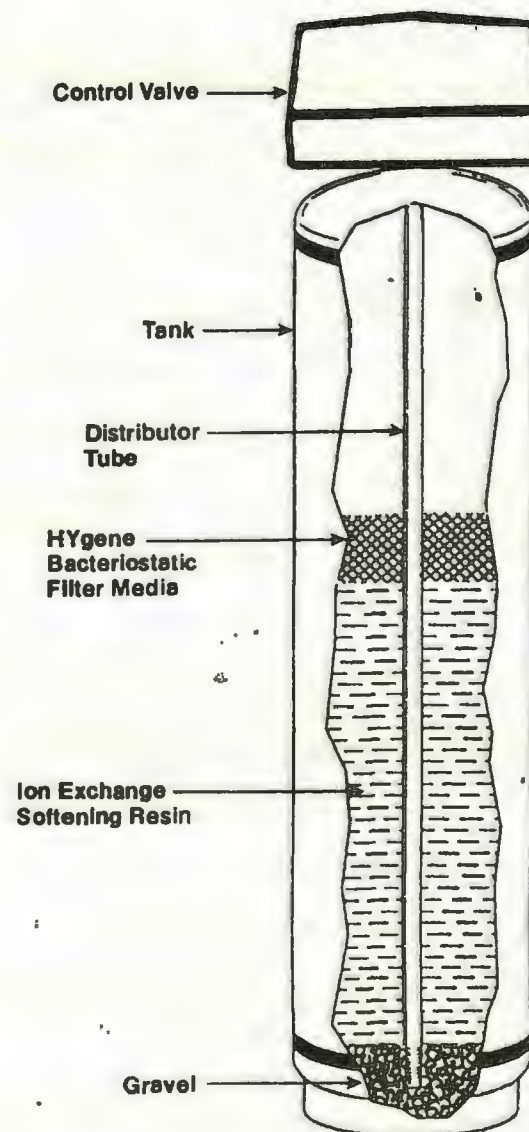
It is suggested that a water meter reading be noted at time of installation. Add to that reading the expected gallonage life of the Bacteriostatic medium from the above chart. Record what the water meter reading will be when replacement should be made.

Water meter reading at time of installation _____ Gallons

Expected life of Media (from above chart) + _____ Gallons

Water meter reading, media replacement _____ Gallons

GENERAL IONICS BACTERIOSTATIC WATER CONDITIONERS





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

04/05/2002

CHRISTINA M. SWICK, AGENT FOR
IONICS, INCORPORATED
122 C STREET, NW, SUITE 740
WASHINGTON DC 20001

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

PRODUCT NAME: GENERAL IONICS MODEL IQ0820B BACTERIOSTATIC WATER
COMPANY NAME: LEWIS & HARRISON FOR IONICS
OPP IDENTIFICATION NUMBER: 287811
EPA REGISTRATION NUMBER: 35900-3
EPA RECEIPT DATE: 04/03/2002

SUBJECT: RECEIPT OF AMENDMENT

DEAR REGISTRANT:

The Office of Pesticide Programs has received your application for an amendment and it has passed an administrative screen for completeness.

During the initial screen we determined that the application qualifies for fast track review. The package will now be forwarded to the Product Manager for review to determine its acceptability.

If you have any questions, please contact Marshall Swindell, Product Manager 33, at (703)-308-6230.

Sincerely,

A handwritten signature in cursive script that reads "J. Wrice".

Front End Processing Staff
Information Services Branch
Program Management and Support Division

**GENERAL IONICS®
MODEL IQ0820B
BACTERIOSTATIC WATER CONDITIONER
WITH HYGENE®**

**Inhibits the growth of bacteria within the ion exchange softener
filter medium for municipally treated water.**

KEEP OUT OF REACH OF CHILDREN

CAUTION:

EPA Reg. No. 35900-3 EPA Est. No. 35900 PA 01

**Storage of HYgene® Material: Store in closed container which excludes moisture
and chemical fumes.**

Active Ingredient: Silver as metallic 0.07%

Inert Ingredients: 99.93%

Total 100.00%

Directions For Use: See Homeowner's Manual

**Disposal Of Spent Media: Remove HYgene® media from top of filter bed,
wrap in paper, and discard with trash.**

Net Contents: One (1) Bacteriostatic Water Conditioner with HYgene®

Another fine product by the manufacturers of General Ionics Water Conditioning Equipment



IONICS
IONICS, INCORPORATED

3039 Washington Pike, Bridgeville, PA 15017

**ACCEPTED
with COMMENTS
in EPA Letter Dated**

MAR 13 1995

**Under the Federal Insecticide,
Fungicide, and Rodenticide
Act, this product is being
registered under EPA Reg. No.**

35900-3

HYGENE MEDIA REPLACEMENT INSTRUCTIONS
FOR
GENERAL IONICS BACTERIOSTATIC WATER CONDITIONER

- . Inhibits the growth of bacteria in the ion exchange softener filter media
- . Removes objectionable tastes, odors, and color from municipally treated water

FOR USE ON COLD WATER ONLY



It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

ACCEPTED
with COMMENTS
in EPA Lab. tested:

MAR 13 1995

35900-3

REV. 2/1/94

HYGENE TRANSFER PROCEDURE

100000

MAR 13 1995

TO REMOVE EXHAUSTED MEDIA

Remove cover from control valve.

Loosen flow control retainer screw on drain line and remove flow control housing and drain line from control valve body.

Replace the 1.5 gpm flow control button with a 2.4 gpm button.

Reinstall flow control housing and drain line to valve body. Tighten screw.

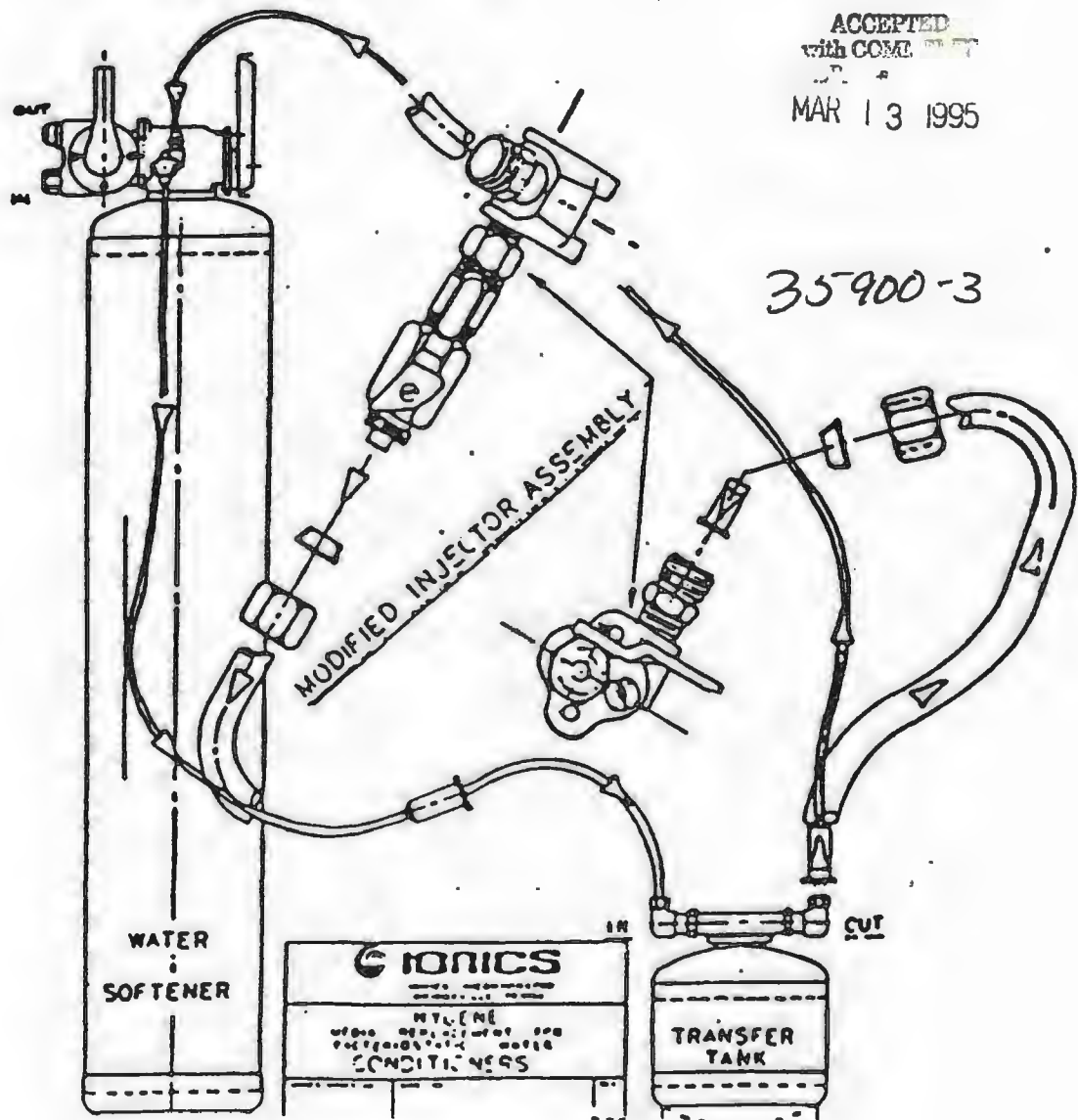
Depress red button on front of timer and turn black center knob clockwise to Backwash position. Allow unit to backwash until all exhausted HYGENE media is removed. Move bypass handle to Bypass position.

TO ADD NEW HYGENE MEDIA

- 1) Depress red button on front of timer. Turn black center knob to next cycle, Brine and Rinse position. Pull electrical plug.
- 2) Add new HYGENE recharge to transfer tank and fill tank with water.
- 3) Remove present injector assembly and brine tube from control valve and install the modified injector body, gasket and two screws provided. (For correct orientation, refer to drawing)
- 4) Attach 3/8" O.D. poly flow tubes as shown in drawing. (Headpiece on transfer tanks is marked "In" and "Out".)
- 5) Make sure single lever ball attached to modified injector is closed. (Lever turned 90° in reference to valve body)
- 6) Invert stainless steel transfer tank to permit HYGENE media to suspend itself in water. Open single lever ball valve while tank is inverted or immediately after uprighting tank. This will eliminate the possibility of HYGENE media becoming packed in the bottom of the transfer tank.
- 7) Feed water will pass through the ball valve and poly flow tubing, entering the inlet at the top of the transfer tank. Push the new HYGENE media up the PVC dip tube, through the other poly flow tube and into the water softener. The new HYGENE media will locate itself on top of the water softener media bed. Since the poly flow tubing is natural in color, the new HYGENE media can be seen moving through the piece of poly flow tubing that is attached to the vertical adapter on the modified injector body. When this line becomes clear, slightly agitate transfer tank to disturb possible remaining HYGENE in transfer tank. When line is clear, move bypass handle to Bypass position. Allow pressure in system to pass through the drain line. Leaving poly flow tubes attached for next transfer, remove modified injector body. Inspect and replace original injector assembly and safety brine valve. Remove the 2.4 gpm flow button from the drain line and replace with the original 1.5 gpm button. Connect drain line.
- 8) Depress red button on front of timer and move control valve to the Service position. Move bypass handle to Service position. Plug in cord set and set timer to correct time of day. Open a cold water tap and run cold water for approximately 3 minutes.

TRANSFER EQUIPMENT

1. Transfer Tank complete with #490 Headpiece, Dip Tube and necessary fittings. (completely assembled)
- II. Two, 5 ft. lengths of 3/8" O.D. Natural Poly Flo Tubing
- III. Plastic bag containing the following:
 - (1) 2.4 gpm Drain Line Flow Control Rubber Button
 - (3) Brass Insert Sleeves (one not required at 1/4" ball valve)
 - (1) Modified Transfer Injector Body with necessary fittings, completely assembled (Nozzle Orifice plugged)
 - (1) Injector Body Gasket
 - (2) Injector Screws 10-24 x 1 1/4"



**HYGENE® REPLACEMENT MEDIA
GENERAL IONICS® BACTERIOSTATIC
WATER CONDITIONER**

Inhibits the growth of bacteria within the ion exchange softener
filter media from municipally treated tap water.

CAUTION

KEEP OUT OF REACH OF CHILDREN

STORAGE OF HYGENE® MEDIA: Store in closed container which
excludes moisture and chemical fumes.

DIRECTIONS FOR USE: See enclosed instruction sheet.

DISPOSAL OF SPENT MEDIA: Retain shipping carton and plastic
liner for disposing of exhausted filter media with trash.

ACTIVE INGREDIENT

Silver as Metallic 1.06%

INERT INGREDIENT

Activated Carbon 98.96%

NET CONTENTS: One (1) Bacteriostatic Media Replacement only for
General Ionics Bacteriostatic Water Conditioner.

MODEL NUMBER

IQ 0820-B

EPA Reg.

No. 35900-3

NET WEIGHT

2.0 lbs.

EPA Est. No. 35900 PA 1

LOT NO. _____

Another fine product by the manufacturers of General Ionics Water Conditioning Equipment



IONICS
IONICS, INCORPORATED

3039 Washington Pike Bridgeville, Pa. 15017

ACCEPTE

MAR 13 1995

35900-3

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460



OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES
Antimicrobials Division

May 8, 2002

SUBJECT: PRODUCT CHEMISTRY REVIEW OF:
General Ionics Model IQ820B Bacteriostatic Water Conditioner

DP Barcode: 282377

Reg. No. Or File Symbol: 35900-3

Manufacturing-use [] OR

End-use Product [X]

TO: Marshall Swindell/Karen Leavy-Munk
PM Team No. 33

FROM: Nancy Whyte, Chemist *NW*
Product Science Branch, CT Team
Antimicrobials Division (7510C)

THRU: Karen P. Hicks, CT Team Leader
Product Science Branch
Antimicrobials Division (7510C)

Karen P. Hicks
5/8/02

THRU: Michele E. Wingfield, Chief
Product Science Branch
Antimicrobials Division (7510C)

Product Formulation

Active Ingredient(s)

Silver

% by wt.

0.77%

BACKGROUND:

The registrant has submitted revised Confidential Statements of Formula for several water filter products. Five of the eight submitted were notifications of additional ingredient suppliers and did not require product science review. Two submissions contained revised basic formulas and also had application requests for registration of alternate formulations which contained a new inert ingredient used for ion exchange. One was adding suppliers for gravel.

FINDINGS:

1. The new inert ingredient [REDACTED] used in the alternate formulations has the same chemical composition as [REDACTED]. According to the supplier, the only difference is that the new material has [REDACTED]. The Pesticide Chemical (PC) code is the same for both ingredients. This is the only change from the basic formula.
2. The certified limits of the ingredients in the formulations are within the range of the Agency limits stated in 40 CFR, Part 159.175.
3. The nominal concentration of the active ingredient silver listed on the Confidential Statements of Formula are in agreement with that listed in the label ingredient claims statement, conforming to the recommendations of PR Notice 91-2.
4. Additional suppliers' names and addresses and a change in the name of the production facility have been added to the Confidential Statements of Formula.

RECOMMENDATIONS:

1. The Confidential Statements of Formula for the amended basic formula and the new alternate formula, dated May 7, 2002 are acceptable.

NON-FQPA

SUBMISSION BAR CODE # 5587600

REVIEWER M Terry

CODING FORM FOR APPLICATIONS FOR REGISTRATION/AMENDMENTS

FILE SYMBOL/REG NO. 35900-3 PM 33 ACTION CODE 350

DESCRIPTOR PR Notice 2000-3

[] CHILD RESISTANT PACKAGING: [] CERTIFICATION
[] NON-RESIDENTIAL USE ONLY
[] NOT APPLICABLE

REGISTRATION TYPE: [] CONDITIONAL [] UNCONDITIONAL

PROPOSED CLASSIFICATION: [] GENERAL [] RESTRICTED USE

DATE ON APPLICATION

EPA RECEIVE DATE

PM RECEIVE DATE

10 17 00

10 20 00

10 23 00

METHOD OF SUPPORT

FORMULATORS EXEMPTION

[] CITE-ALL
[] SELECTIVE
[] NOT SUBMITTED
[] NOT APPLICABLE
[] INCORRECT/RESUB

[] SUBMITTED
[] NOT SUBMITTED
[] NOT APPLICABLE
[] INCORRECT/RESUB

REVIEW(S) REQUESTED

DATA
PACK #

DATE
SENT

DUE
DATE

DATE
RETURNED

CHEMISTRY

EFFICACY

TOXICOLOGY

HED TOX.

ENVIRON. FATE

FISH/WILDLIFE

OTHER

STATUS

RESPONSE CODE 37

RESPONSE DATE NOV 02 2000



P.O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE 412-257-2029 FAX 412-257-1270

October 17, 2000

U.S. Environmental Protection Agency
Office of Pesticides Programs
Registration Division (7504C)
401 M St., S.W.
Washington, D.C. 20460

Attn: Marshall Swindell
Product Manager 33
Regulatory Management Branch I
Antimicrobial Division (7505C)

Re: PR Notice 2000-3
Ionics Product Registration Numbers: 35900-2; 35900-3; 35900-6; 35900-7; 35900-8;
35900-13; 35900-16; 35900-18; 35900-19; 35900-20 and 35900-21

Dear Mr. Swindell:

Pursuant to the above referenced PR Notice 2000-3 regarding First Aid Statements on Pesticide Product Labels, I am sending this letter as a formal confirmation of my communications and discussions with your Ms. Karen Leavy-Munk.

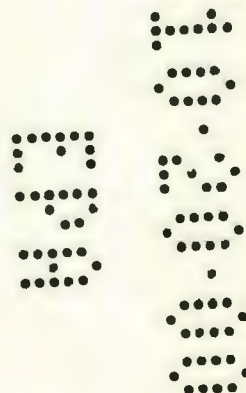
Basically, the above referenced products' labels only require the precautionary statement "Keep Out of Reach of Children" above the signal word "Caution", which already appears on all of our labeling. Additionally, we are to follow Toxicity Category IV across the board in regards to First Aid Statements due to the only active pesticide ingredient being Silver.

With this formal confirmation, shortly we will be forwarding our present labels with any modification required by Toxic Category IV, as outlined in the above referenced PR Notice, to your offices for review and acceptance.

Thank you for your continued support and guidance in our registration of product through the U.S. EPA.

Sincerely,
Ionics, Incorporated

John Henigin
Manager, Chemical Products and Projects





U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDE PROGRAMS (TS-767)
WASHINGTON, DC 20460

NOTICE OF SUPPLEMENTAL REGISTRATION OF DISTRIBUTOR

(Please read instructions before completing)

EPA REGISTRATION NO. OF PRODUCT

DISTRIBUTOR COMPANY NUMBER

35900-3

57662

NAME AND ADDRESS OF BASIC REGISTRANT (print or type; include ZIP code)

3713/6/3

IONICS, INC.
P.O. BOX 99
3039 WASHINGTON PIKE
BRIDGEVILLE, PA 15017

NAME OF REGISTERED PRODUCT (basic product name accepted by EPA)

GENERAL IONICS MODEL IQ0820B
BACTERIOSTATIC WATER CONDITIONER

DISTRIBUTOR PRODUCT NAME

GENERAL IONICS MODEL EE0820B
BACTERIOSTATIC WATER CONDITIONER

NAME AND ADDRESS OF DISTRIBUTOR (print or type; include ZIP code)

GENERAL IONICS, INC.
4178 MARKET STREET
YOUNGSTOWN, OHIO 44512

DISTRIBUTOR

We intend to market under the Distributor Product Name and Number specified above, subject to the conditions specified on this form.

SIGNATURE AND TITLE OF DISTRIBUTOR

DATE

REGISTRANT

It is requested that the Registration Record of this jacket include the Distributor Product specified above, subject to the conditions specified on this form.

SIGNATURE AND TITLE OF REGISTRANT

DATE

INSTRUCTIONS

After a registrant has obtained final registration for the basic product, the registrant may then supplementally register and distribute his/her product. One form must be submitted for each distributor brand and must be signed by the distributor involved. The form must state the basic registration number and the distributor company number.

If a registrant has a potential distributor who does not have a company number assigned, she/he should have the distributor apply, on letterhead stationery, to the Registration Division to have a number assigned prior to submitting a Distributor Notification to the Agency.

Notification forms must be submitted by the basic registrant. They must have the concurrence and signature of both the registrant and the distributor.

When submitting several forms for the same basic product, submitting them together will facilitate processing.

NOTE: DO NOT submit distributor product labels.

CONDITIONS

1. The distributor product must have the same composition as the basic registered product.
2. The distributor brand product must be manufactured and packaged by the same person who manufactures and packages the registered basic product.
3. The labeling for the distributor product must bear the same claims as the basic product, provided, however, that specific claims may be deleted if by doing so no other changes are necessary.
4. The product must remain in the manufacturer's unbroken container.
5. The label must bear the EPA registration number of the basic registered product, followed by a hyphen and the distributor's company number.
6. Distributor products must bear the name and address of the distributor qualified by such terms as "packed for . . .", "distributed by . . .", or "sold by . . ." to show that the name is not that of the manufacturer.
7. All conditions of the basic registration apply equally to distributor brand products. It is the responsibility of the basic registrant to see that all distributor labeling is kept in compliance with requirements placed on the basic product.

RECEIVED BY EPA REGISTRATION DIVISION ON THE DATE STAMPED BELOW

Reviewer ID

Submission No.

Data Package No.

5496474

CODING FORM FOR APPLICATIONS FOR REGISTRATION/AMENDMENTS

File Symbol/Reg. No. 35900-3 PM31

Action Code _____

☒ 10 Descriptor (Amend/Resubmissions only) _____

☒ 5 Intrastate Call-in ☐ (Y) Yes ☐ (N) No

☒ 15 Child-resistant Packaging

☐ (C) Certification

☐ (S) Service Person

☐ (R) Non-residential Use Only

☐ (N) Not-Applicable

☒ 20 Registration Type:

☒ (1) Conditional

☐ (2) Unconditional

☒ 25 Proposed Classification: ☒ 30 Final Classification:

☐ (R) Restricted

☐ (R) Restricted

☐ (G) General

☐ (N) Not Classified

☒ 35 Date on Application:

01 6 22 95
MO DAY YR

☒ 04 EPA Received Date:

01 6 22 95
MO DAY YR

☒ 40 Date Received by PM

01 6 22 95
MO DAY YR

☒ 80 Method of Support:

☐ (1) Cite-All

☐ (6) Owner Submission

☐ (4) Not Applicable

☐ (7) Total Submission

☐ (5) Not Submitted

☐ (8) Selective Method

Reviewers Requested:

CH

EF

PL

DEB

NDEB

TB

EEB

EFGB

DATE
SENT

DUE
DATE

DATE
RETURNED

RESPONSE
CODE

RESPONSE
DATE

☒ 115 FINAL Response
ACTION Code 38

☒ 120 Response

07 18 95

75-DAY RESPONSE DUE DATE: _____

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

JUL 18 1995

Ionics, Inc.
3039 Washington Pike
Brideville, PA 15017

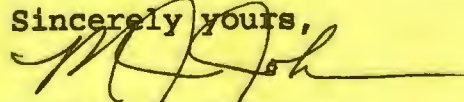
Attention: Walter J. Polens

Subject: General Ionics Model MIV-8 Bacteriostatic Water
Conditioner
EPA Registration Number 35900-3
Your Submission Dated June 22, 1995
EPA Received Date June 22, 1995

The submitted final printed labels have been placed in your file. They have not been reviewed in accordance with the PR Notice 82-2.

If you have any questions concerning this letter, please contact Karen M. Leavy-Munk at (703)-305-6966.

Sincerely yours,


Marion J. Johnson
Product Manager (31)
Antimicrobial Program Branch
Registration Division (7505C)

CONCURRENCES

SYMBOL								
SURNAME								
DATE								

Reviewer ID

Submission No. 548097

Data Package No.

CODING FORM FOR APPLICATIONS FOR REGISTRATION/AMENDMENTS

File Symbol/Reg. No. 35900-3 PH 31

Action Code 675

10 Descriptor (Amend/Resubmissions only)

5 Intrastate Call-in ☐ (Y) Yes ☐ (N) No

15 Child-resistant Packaging

☐ (C) Certification

☐ (S) Service Person

☐ (R) Non-residential Use Only

☐ (N) Not Applicable

20 Registration Type:

☒ (1) Conditional ☐ (2) Unconditional

25 Proposed Classification: 30 Final Classification:

☐ (R) Restricted

☐ (R) Restricted

☐ (G) General

☐ (N) Not Classified

35 Date on Application:

04 EPA Received Date:

40 Date Received by PH

10 11 13 95
MO DAY YR

10 11 13 95
MO DAY YR

10 11 13 95
MO DAY YR

80 Method of Support:

☐ (1) Cite-All

☐ (6) Owner Submission

☐ (4) Not Applicable ☐ (7) Total Submission

☐ (5) Not Submitted ☐ (8) Selective Method

Reviewers Requested:

CH

EF

PL

DEB

NDEB

TB

EEB

EFGB

DATE
SENT

DUE
DATE

DATE
RETURNED

RESPONSE
CODE

RESPONSE
DATE

115 FINAL Response ACTION Code 22

120 Response

031395

75-DAY RESPONSE DUE DATE: 1 Y

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

CONCURRENCES

SYMBOL								
SURNAME								
DATE								

- d. Revise the statement " Removes.....treated tap water" to read "This product is designed to remove objectionable tastes, odors, and color from municipally treated tap water."
- e. Revise the phrase "General Classification" to read "Directions for Use."
- f. Place the phrase "Keep Out of Reach of Children" directly above the signal word "Caution."

The Confidential Statements of Formula dated April 11, 1994, is in compliance with PR Notice 91-2, it agrees with the label and are acceptable.

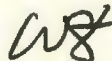
Both label ingredient statements are in compliance with PR Notice 91-2, both agree with the Confidential Statements of Formula and label claims for both are nominal concentrations and are acceptable.

A stamped copy of the labeling is enclosed for your records.

Submit one copy of final printed labeling before releasing the product in channels of trade with the revised labeling.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

Sincerely,



Walter C. Francis
Acting Product Manager (31)
Antimicrobial Program Branch
Registration Division (7505C)

GENERAL IONICS®
MODEL IQ0820B
BACTERIOSTATIC WATER CONDITIONER
WITH HYGENE®

This product is designed to inhibit the growth of
bacteria in the ion exchange softener filter medium for
municipally treated water to prolong the life of the filter.

KEEP OUT OF REACH OF CHILDREN
CAUTION

EPA REGISTRATION NO. 35900-3

EPA ESTABLISHMENT NO. 35900 PA 01

ACTIVE INGREDIENT: Silver as metallic	0.07%
INERT INGREDIENTS:	99.93%
TOTAL.....	100.00%

STORAGE OF HYGENE® MEDIA----- Store in closed container which excludes
moisture and chemical fumes.

DISPOSAL OF SPENT MEDIA----- When contents are exhausted, wrap in
newspaper and discard in the trash.

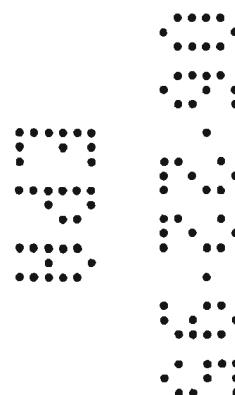
DIRECTIONS FOR USE----- See Homeowner's Manual.

NET CONTENTS: One (1) Bacteriostatic Water Conditioner with HYgene®

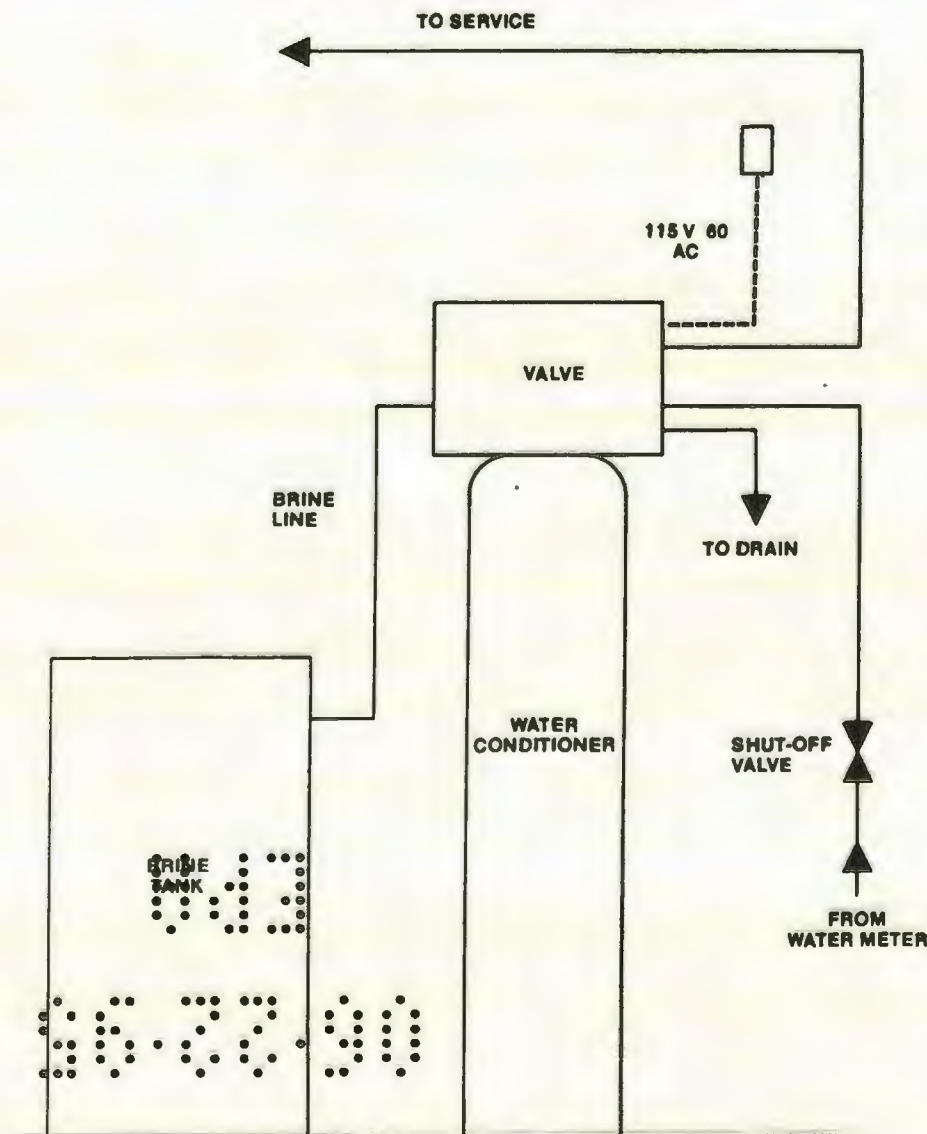
IONICS, INCORPORATED. 3039 WASHINGTON PIKE, BRIDGEVILLE, PA 15017



IONICS
IONICS, INCORPORATED



TYPICAL INSTALLATION FOR GENERAL IONICS BACTERIOSTATIC WATER CONDITIONER



INSTALLATION INSTRUCTIONS

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

- 1. Select Location**—The location selected must be convenient for drain facilities, electrical outlet and convenient for servicing and adding salt.
- 2. Unpacking**—The Bacteriostatic Water Conditioner has been shipped complete in two cartons.
One carton contains the mineral tank which is preloaded with gravel bed, high capacity ion exchange resin and HYgene Bacteriostatic Water Filter Media. The control valve is mounted on top of this tank.
The second carton contains the salt storage tank and its components.
- 3. Turn main water supply off and drain system.**
- 4. Cut the main supply line and remove approximately 6 inches of existing plumbing.**
- 5. Remove control face plate and shroud. Place the mineral tank on the three plastic leveling legs and level.**
- 6. Move bypass lever so indicator points to bypass position. Connect the main inlet line to the opening in the valve marked "In". Connect the house service line to the opening marked "Outlet". Connect the drain line, providing a minimum of 2" air gap between end of pipe and drain.**
- 7. Turn main supply on. Customer will have tap water while installation is being completed.**
- 8. Install salt storage tank. Assemble brine valve—connect brine line to control valve—add water to the salt storage tank. Add salt.**
- (a) Move bypass lever until indicator points to service position and then open a cold water faucet at kitchen sink or stationary tub to expel air. When there is a steady flow of water at the faucet, continue running for 15 minutes at flow rate indicated in Table I [Step 9 (a)].**
 - (b) Press and hold the red button on the timer. This disengages the drive gear. Turn the black knob on the large cycle dial to backwash position to expell air compressed in the unit. When there is a steady flow of water at the drain, continue running for 10 minutes at flow rate indicated in Table I [Step 9 (b)].**
 - (c) Again press and hold the red button to disengage the drive gear. Turn black knob and cycle dial to service position. Again open cold water tap at the kitchen sink or stationary tub. Continue running for 10 minutes at flow rate indicated in Table I [Step 9 (c)]. See note following Table I. Unit is now in service.**

TABLE I
INSTALLATION FLOW RATES PRIOR TO
IN-SERVICE USE

Model Nos. (EE or IQ)	Step 9 (a) Service	Step 9 (b) Backwash	Step 9 (c) Service
0820-B	3 GPM/15 min.	1.5 GPM/10 min.	8 GPM/10 min.
1240-B	6 GPM/15 min.	3.0 GPM/10 min.	10.9 GPM/10 min.

NOTE: If flow rate in Step 9 (c) cannot be achieved due to low line pressure, run water a maximum flow until equivalent gallonage is reached.

TABLE II
LIFE EXPECTANCY OF HYGENE
BACTERIOSTATIC MEDIA

Model Nos. (EE or IQ)	Tank Diameter	HYgene Content	Bacteriostatic Medium Life Gallons	Family of 4
0820-B	8"	2 lb.	75,000	1 year
1240-B	11"	4 lb.	150,000	2 years

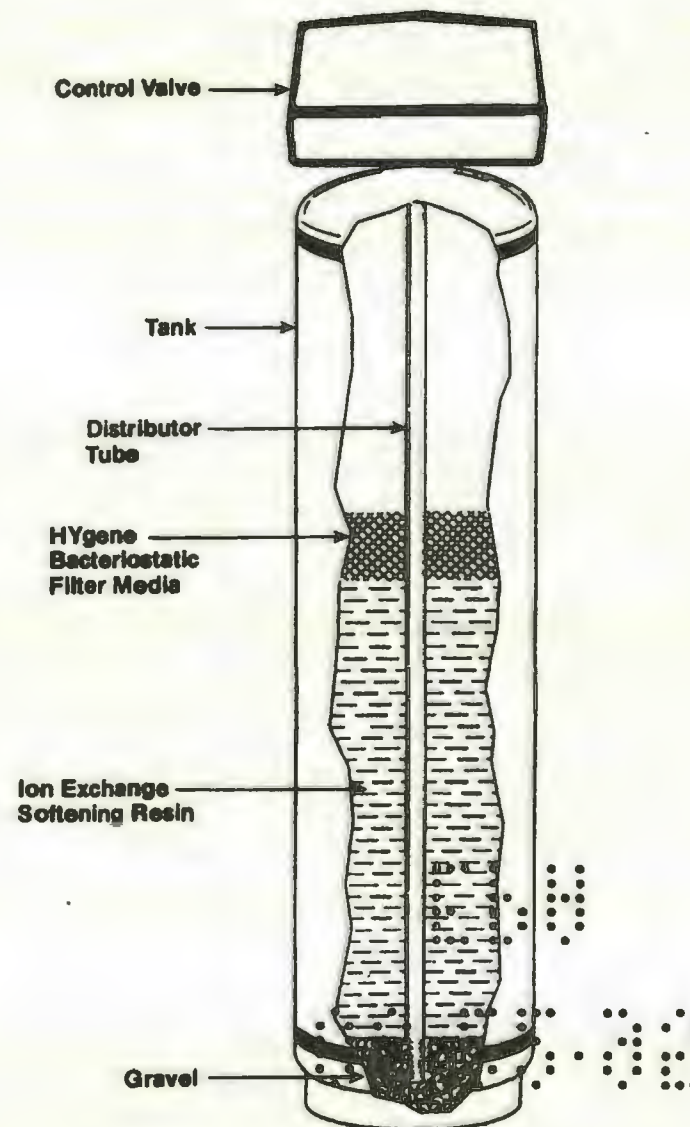
It is suggested that a water meter reading be noted at time of installation. Add to that reading the expected gallonage life of the Bacteriostatic medium from the above chart. Record what the water meter reading will be when replacement should be made.

Water meter reading at time of installation _____ Gallons

Expected life of Media (from above chart) + _____ Gallons

Water meter reading, media replacement _____ Gallons

GENERAL IONICS BACTERIOSTATIC WATER CONDITIONERS





Model IQ Special Features

Directions For Use

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

For use on cold water only.

Meter-Controlled Regeneration

The Model IQ control minimizes salt usage and water waste by accurately monitoring the conditioned water and then initiating a regeneration only when the S-759 mineral is near exhaustion. Six-cycle downflow brining assures accurate salting while the adjustable time regeneration program uses the minimum amount of water required per cycle.

In service a mechanical meter accurately monitors water usage. This feature eliminates the costly wasted capacity due to premature regenerations.

Vacation Periods

There is no need to be concerned about disconnections or adjustments on your Model IQ Water Conditioner before leaving your home for long periods of time. When no water is being used, the "brain" will simply remain idle for that period of time and be ready to monitor water usage when you return home.

High Usage Demand/Weekend Guests

The Model IQ Water Conditioner's "brain" will automatically recognize the increase in water usage and regenerate before running out of conditioner water. Unpredictable water demand is never a problem with the General Ionics Model IQ.

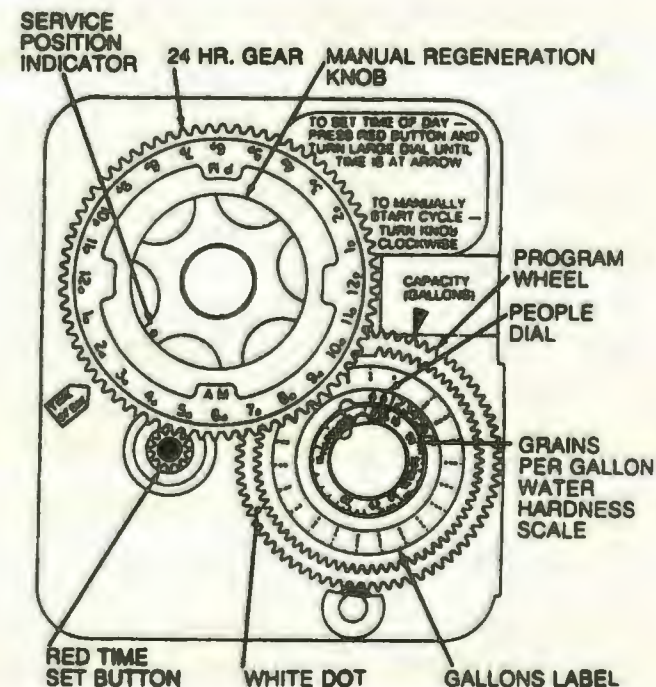
How To Set The Time Of Day

If you should have a power failure or want to adjust for Daylight Savings Time, follow these instructions:

Press and hold in the red button to disengage the drive gear.

Turn the large gear until the actual time of day is opposite the time of day pointer.

Release the red button to engage the drive gear.



How To Manually Regenerate Your Water Conditioner At Any Time

Turn the manual regeneration knob clockwise.

This slight movement of the manual regeneration knob engages the program wheel and starts the regeneration program.

The black center knob will make one revolution in the following three hours and stop in the position shown in the drawing.

Even though it takes three hours for this center knob to complete one revolution, the regeneration cycle of your unit might be set for only one-half of this time.

In any event, conditioned water may be drawn after rinse water stops flowing from the water conditioner drain line.



Model EE Special Features

Directions For Use

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

For use on cold water only.

Energy Efficient Control

This fully automatic six-cycle valve with 12-day timer schedules regenerations at preset intervals. The day and the hour for regeneration, as well as the salt dosage, have been set at the time of installation by the installer. These settings have been carefully calculated according to your family needs and to get the maximum recovery of the resin while minimizing water usage. **Do Not Change These Settings Without First Consulting Your Dealer.**

Vacation Periods

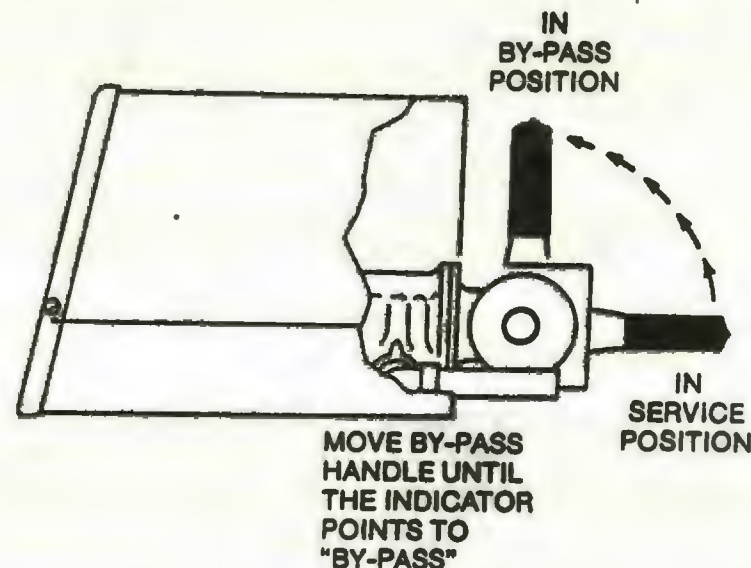
Why allow your water conditioner to continue regenerating while you are on vacation? It would be a waste of salt to recharge an already charged mineral bed. With your Energy Efficient General Ionics Model EE Water Conditioner, vacation time has been taken into account. Simply move the by-pass valve lever (see illustration on page 5 of this manual) until the indicator points to "by-pass". By doing so, the unit will continue to go through the preset regeneration cycles, but actually it will not regenerate. When you return home, move the by-pass valve lever back to the "service" position and you will again have conditioned water as before.

High Usage Demand/Weekend Guests

As mentioned previously, your General Ionics Model EE unit is set for your own needs. Higher than normal usage such as weekend guests will naturally place a greater demand for conditioned water on the unit. The method for manually regenerating the unit is covered on page 9. This "extra" regeneration will not interfere with the regular programmed cycle.

By-Pass Instruction

In case any problem should occur that cannot be immediately resolved, it is recommended to manually by-pass the unit as shown and call your authorized General Ionics dealer.



LIFE EXPECTANCY OF HYGENE BACTERIOSTATIC MEDIA

Model Nos. (EE or IQ)	Tank Diameter	HYgene Content	Bacteriostatic Gallons	Medium Life Family of 4
0820-B	8"	2 lb.	75,000	1 year
1240-B	11"	4 lb.	150,000	2 years

It is suggested that a water meter reading be noted at time of installation. Add to that reading the expected gallonage life of the Bacteriostatic medium from the above chart. Record what the water meter reading will be when replacement should be made.

Water meter reading at time of installation _____ Gallons

Expected life of Media (from above chart) + _____ Gallons

Water meter reading, media replacement _____ Gallons

When To Add Salt

The brine tank has a capacity up to 250 lbs. of nugget or pellet salt. You can add salt whenever it is most convenient for you, but it is important to replenish the supply before the pellets reach the "add salt" level indicated by the label on the salt storage tank.

Bridging Or Caking

The salt platform in your brine tank has been engineered to eliminate salt bridging or caking. However, under certain atmospheric conditions these circumstances can occur and will prevent the salt from coming in contact with the water level. When your water seems to be hard, check the salt in the storage tank. If it appears to be bridging or caking, break it up with a short wooden stick. In doing so, be careful not to probe the full depth of the brine tank because you may damage the salt platform.

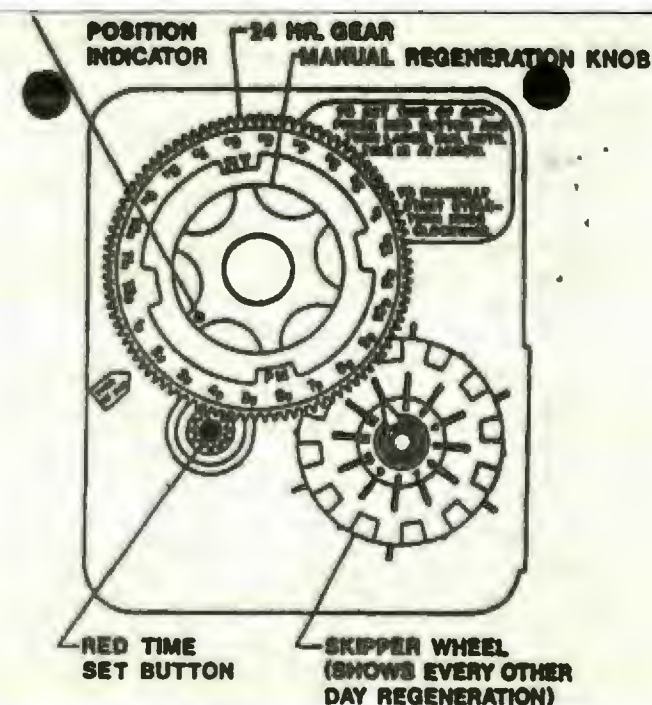
Bacteriostatic — An Ionics Exclusive

If your General Ionics Water Conditioner is an Environmental Protection Agency (EPA) Registered Bacteriostatic model, you have two unique added features. First, this unit inhibits the growth of bacteria within the S-759 ion exchange filter media bed. Second, it reduces and in many cases completely eliminates organic tastes, odors and colors from the water.

Inside the Bacteriostatic model water conditioner a layer of Hygene® silver-impregnated activated carbon (EPA-Registered Bacteriostatic Water Filter Media) is placed on top of the S-759 mineral. The silver acts as the inhibiting agent while the activated carbon adsorbs objectionable tastes, odors and colors.

IT IS A VIOLATION OF FEDERAL LAW to use this product in a manner inconsistent with its labeling. Only use EPA Registered Hygene silver-impregnated carbon replacement media in this unit. Use of any media material other than Hygene silver carbon manufactured by Ionics, Incorporated is a violation of the improper operation of the unit, and voids the manufacturer's warranty. For your protection, do not accept a replacement media unless it is factory-sealed with both the tape and label reading "Hygene" manufactured by Ionics, Incorporated.

EPA has restricted the Bacteriostatic models for use only on treated municipally supplied tap water, which precludes its use on well water.



How To Set The Time Of Day

If you should have a power failure or want to adjust for Daylight Savings Time, follow these instructions:

Press and hold in the red button to disengage the drive gear.

Turn the large gear until the actual time of day is opposite the time of day pointer.

Release the red button to engage the drive gear.

How To Manually Regenerate Your Water Conditioner At Any Time

Turn the manual regeneration knob clockwise.

This slight movement of the manual regeneration knob engages the program wheel and starts the regeneration program.

The black center knob will make one revolution in the following three hours and stop in the position shown in the drawing.

Even though it takes three hours for this center knob to complete one revolution, the regeneration cycle of your unit might be set for only one-half of this time.

In any event, conditioned water may be drawn after rinse water stops flowing from the water conditioner drain line.

Questions And Answers

Q. What is water conditioning?

A. Water conditioning is that branch of engineering that determines the chemical characteristics of a tap water supply, as it enters your home, and treats these characteristics so as to provide water more suitable and economical for household use.

Q. Why is it essential to improve water quality?

A. Beyond being an absolute necessity of life, water is an outstanding cleaning agent. The trouble is that nature does a lot of things with water long before you have a chance to use it in your laundry or at your kitchen sink. You get it, as it were, second hand. Therefore, improving your water quality by water conditioning is just as essential as any other home appliance.

Q. Does the conditioned water have a "different" taste?

A. Taste is difficult to define as no two people have the same sense of taste. A water conditioner will remove certain minerals and turbidity from the water, giving you a cleaner, better tasting water.

Q. Will conditioned water give a cleaner, brighter wash?

A. Yes. For best results, you should use the proper amount of laundering agent. Keep in mind a 60 to 80% soap saving can be achieved with conditioned water. Learn to use less laundering agent because none of the cleansing compound will be wasted as in hard water cleaning. The amount of laundering agent you use depends on: (1) its effectiveness, (2) the volume and temperature of water, (3) the size of the wash load, and (4) the type and amount of dirt and grime.

Q. What effect will conditioned water have on plumbing?

A. Before the water was conditioned, the hard water caused a scale build-up in the hot water pipes and water heater. Scale acts as an insulating material. In the water heater, scale reduces heat transmission, wastes fuel and often causes heating coil and tube failure. The installation of a water conditioner not only prevents further scale formation but will gradually remove previously formed scale deposits. A recent study indicates that softened water offers a saving of 23% in energy cost in the operation of a hot water heater.

Q. Are the minerals which a conditioner removes from hard water essential to health?

A. No. The quantity of minerals found in hard water are not essential to good health.

Q. Is the sodium in softened water harmful to people on restrictive diets?

A. Much depends on the strictness of the diet itself.

When the patient is on an extremely restrictive diet, he should drink neither hard nor softened water. Under these conditions he should have demineralized water, distilled water, or water known to be free of sodium for drinking and for the cooking of foods.

Such patients are commonly hospitalized.

Regeneration

Your General Ionics Water Conditioning unit consists of a tank filled with a premeasured amount of a special mineral called S-759, formulated especially for General Ionics equipment. On top of the tank is the control valve/timer, which works on the same principle as an electric clock. Alongside the unit is a storage tank which holds the salt and brine for the regeneration cycle.

Regeneration means recharging or recleaning the special S-759 mineral. It is important to know that the entire cycle is automatic and you will have nothing to do with it. The following steps are for your own enlightenment... and to demonstrate the thoroughness of the automatic cycle: 1. Backwashing, which reverses the action of the water, throws off the sediment (called turbidity) that has been filtered out of the water, and flushes it down the drain. 2. Salt, as brine, is injected into the unit to clean and revitalize the S-759 mineral. (The amount of salt used is controlled by a float valve, which operates the same as the float in the water tank of your toilet.) 3. Slow rinse. 4. Fast rinse. 5. Valve automatically returns to the service position to again supply you with good, conditioned water.

What Salt To Use

Salt is your water conditioner's fuel. Using the right fuel is as important here as it is to get the best performance from your car. It is strongly recommended to use only nugget or pellet type salt in your water conditioner. This type of salt is pure and free of undesirable insolubles. Nugget or pellet type water conditioner salt is available from your General Ionics dealer.

NOTE: Common rock salt is NOT recommended because much of it contains insolubles. The continued use of common rock salt will necessitate more frequent cleaning of the brine tank, or worse, it may cause a malfunction of the valving. However, specially processed water conditioner rock salt, as handled by your local dealer, may be used.



General Information

Your General Ionics Water Conditioner is completely automatic. It will provide an abundance of conditioned water with just an occasional addition of salt to the brine tank when the salt reaches the "add salt" level. Your unit was thoroughly tested at the factory before shipping, and again at the time of installation.

The automatic timer is set to "regenerate" your water conditioner at night while you are sleeping. From experience, this is the best time because your water demand is lowest then and regeneration will not interfere with baths, washing clothes, etc. However, unconditioned water is available from all faucets during the regeneration cycle. With the General Ionics Water Conditioner you are never without water.

It is a good idea to wipe the unit occasionally and then apply a good coat of wax. This procedure will keep your water conditioner looking bright and clean for a lifetime.

In case some problem should arise, you can manually by-pass the unit by throwing one lever (see illustration on page 5). Then call your authorized General Ionics dealer. He has been trained in all phases of maintenance and repair work and will have the unit back in operation quickly. If there is not a General Ionics dealer in your vicinity, then contact another reliable water conditioning firm. Failing that, please write directly to the factory: Ionics, Incorporated, P.O. Box 99, Bridgeville, Pennsylvania 15017, Attention: Service Department.

NOTE: Whenever you correspond with the factory, be sure to include the model and serial number written on the inside back cover of this booklet. Explain the problem as best you can. With this information factory technicians can handle the problem promptly with little chance of error.

In establishing a salt-free diet for patients, physicians should not overlook the fact that even hard water may contain appreciable amounts of sodium. To determine the amount a complete analysis of the water is necessary.

- Q. How much sodium is added to softened water?**
A. Each grain per gallon (GPG) hardness removed adds 7.875 milligrams (mg) of sodium to a liter of water, which is approximately one quart. The average daily sodium intake of an adult individual is 3,000 to 4,000 milligrams and the average fluid intake is 1.6 to 2.0 liters per day. A liter is slightly more than four 8-ounce glasses of water. Two liters per day or 8.4 eight-ounce glasses of water amounts to a total sodium intake from a source of softened 8 GPG water of 125.16 milligrams. This is approximately 3% of the average daily sodium intake.

There is another way to answer this question, and that depends on the hardness of your raw water. The following table shows the additional amount of sodium consumed by drinking ONE quart of softened water.

Initial Water Hardness	Sodium Added By Softening
5 Grains/Gallon	37.5 Milligrams/Quart
10 Grains/Gallon	75.0 Milligrams/Quart
20 Grains/Gallon	150.0 Milligrams/Quart
40 Grains/Gallon	300.0 Milligrams/Quart

- Q. How does this sodium content of conditioned water compare to sodium found in common foods?**
A. The data in the following table demonstrate the usual range of sodium in common foods.

Food	Amount	Milligrams Of Sodium
Milk	2 Cups	226
Bread	2 Slices	322
Corn Flakes	1 Ounce	260
Tomato Juice	4 Ounces	504
Chili	1 Cup	1,194
Tomato Soup	1 Cup	932
Beef Broth	1 Cup	1,152
Frankfurter	1 Medium	610
Hamburger (Fast Food)	1/4 Pound	1,510
Catsup	1 Tablespoon	204
Canned Baked Beans	3/4 Cup	1,130
Canned Asparagus	1/2 Cup	560
Frozen Peas	1/2 Cup	295
Cottage Cheese	4 Ounces	457
Parmesan Cheese	1 Ounce	528
Pretzels	1/4 Pound	1,925

It is important to note that about 2/3 of the daily water intake of any individual is through food and only about 1/3 from water itself.

General Ionics Water Conditioner LIMITED WARRANTY

This should be kept in a safe place by the owner.

GENERAL CONDITIONS

Ionics, Incorporated, Bridgeville, Pa., warrants that the General Ionics Water Conditioner to which this limited warranty applies is free from defects in material and workmanship. The attached limited warranty agreement card must be filled out, mailed to, and received by Ionics, Incorporated, within two (2) weeks of the date of installation of the equipment for this limited warranty to be effective.

This limited warranty is extended directly by the manufacturer to the owner, and is the sole warranty applicable. Any other warranties or guarantees, oral or written, expressed or implied, are not recognized.

LIMITED LIFETIME WARRANTY ON MINERAL TANK

This General Ionics Water Conditioning unit carries a limited warranty on the mineral tank. Any such mineral tank that becomes unusable because of leakage, corrosion, or rupture will be replaced or repaired at the option of Ionics, Incorporated. The defective tank must be returned to Ionics, Incorporated, transportation prepaid, within 30 days from date of failure for this limited warranty to be effective.

ELECTRICAL PARTS — LIMITED WARRANTY

Electrical components are warranted for a period of one (1) year of date of installation, provided the defective part is returned, prepaid to Ionics, Incorporated. Valve and/or control valve parts are warranted for a period of five (5) years from date of installation. Any such components found to be defective will be replaced or repaired, within five (5) years of date of installation, provided the defective part is returned, prepaid, to Ionics, Incorporated.

SALT STORAGE TANK — LIMITED WARRANTY

There is a five (5) year warranty on salt storage tank. Any such storage tank that becomes unusable because of leakage or corrosion will be replaced or repaired at the option of Ionics, Incorporated. The original tank must be returned to Ionics, Incorporated, transportation prepaid, within 30 days from date of failure for this limited warranty to be effective.

Salt storage tank components are warranted for a period of one (1) year of date of installation, provided the defective parts are returned prepaid to Ionics, Incorporated.

ION EXCHANGE RESIN — LIMITED WARRANTY

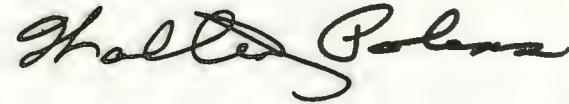
The 8-750 high capacity ion exchange resin housed in the mineral tank carries a limited warranty of one (1) year. A resin sample must be sent to Ionics, Incorporated for testing prior to its replacement under warranty. If the resin is found to be incapable of softening the water because of a flaw in its manufacture, it will be replaced. Warranty does not apply to resin which has been frozen, has become fouled by iron due to improper maintenance, or is found to be ineffective due to any other outside form of neglect.

Congratulations

Ionics, Incorporated welcomes you to a new, carefree way of life with conditioned water. You can take pride and satisfaction knowing that you own the very best.

We are proud that you have selected the General Ionics deluxe quality Water Conditioner for your home. Your sound judgment is supported by the wide acceptance received for these units throughout the world. More and more quality conscious homeowners are purchasing General Ionics Water Conditioning equipment because of its superior performance and its premium quality workmanship.

The following pages of this booklet will introduce you to your new General Ionics Water Conditioner by explaining operation, care and maintenance. In addition, the booklet provides recommendations for getting the very best performance from your unit as well as answers to commonly asked questions.



Vice President
Household Water Conditioning
Ionics, Incorporated



IONICS, INCORPORATED
P.O. Box 99 • Bridgeville, PA 15017

IONICS



Model Number _____
Tank Number _____
Date Installed _____
Dealer _____
Address _____
Telephone _____

LIMITATIONS OF WARRANTY
This limited warranty shall be effective only if the Water Conditioner covered by the limited warranty is properly installed in accordance with installation and operating instructions furnished with the equipment by Ionics, Incorporated, and in accordance with the local plumbing codes and ordinances.
This limited warranty shall be void if any part of the Water Conditioner has been subjected to accident, alteration, abuse, neglect or freezing.
This limited warranty shall not be assignable by the original purchaser and applies only to the original equipment.

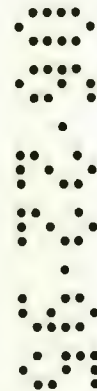
EXTENT OF LIMITED WARRANTY
Under terms of this limited warranty, all tanks are replaced or repaired by Ionics, Incorporated on the basis of F.O.B. manufacturer's plant. Transportation, labor, installation, and service costs are to the customer's account and are not covered by this limited warranty.

BACTERIOSTATIC MODELS — SILVER CARBON REPLACEMENT
IT IS A VIOLATION OF FEDERAL LAW to replace the EPA-registered silver-impregnated carbon media in any Ionics bacteriostatic unit with anything other than IFT gene® silver carbon manufactured by Ionics, Incorporated. The installation of any other media will void this warranty. For your protection, do not accept a replacement media unless it is factory-sealed with both the tape and label reading "IFT gene" manufactured by Ionics, Incorporated.

IMPORTANT

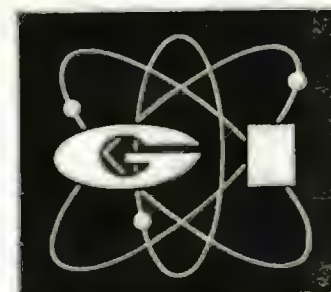
This booklet contains your Owner Limited Warranty Card. Be sure that it is filled in and mailed to the factory within two weeks of installation. Failure to do so will result in voiding the warranty.

Your General Ionics Dealer is...



HOMEOWNER'S MANUAL

GENERAL IONICS
WATER CONDITIONER
Model IQ and Model EE



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00 55 82

IONICS, INCORPORATED

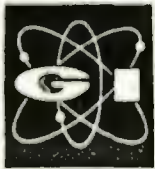


IONICS

IONICS, INCORPORATED

P.O. Box 99
Bridgeville, PA 15017

INTERNATIONAL WATER CONSULTANTS AND
EQUIPMENT MANUFACTURERS • MEMBER
WATER QUALITY ASSOCIATION



GENERAL IONICS BACTERIOSTATIC WATER CONDITIONERS

Q. First, what is a Bacteriostatic Water Conditioner?

A. A Bacteriostatic Water Conditioner is one which not only softens municipally treated water, but also inhibits the growth of bacteria within the ion exchange softening filter medium.

Q. Is there a need to inhibit the growth of bacteria in potable (drinking) water?

A. Since potable water can, by law, contain a number of harmless bacteria indigenous to municipally treated water, the potential for a build-up or growth of these bacteria trapped within the ion exchange softening filter medium does exist.

Q. Why is there a build-up of bacteria in a water conditioning unit?

A. The low level of bacteria in the municipally treated water along with organic compounds normally present in a water supply become trapped in the filter media bed. After a period of time the filter bed contains a considerable number of bacteria and, in the presence of the organic compounds which become a source of nutrients for bacteria, the filter then becomes a breeding place for bacterial growth.

Q. What is in the Bacteriostatic Water Conditioner that inhibits the growth of bacteria within the filter medium?

A. The inhibiting agent is HYgene—an Environmental Protection Agency Registered Bacteriostatic Water Filter Medium. It is the exclusive property of Ionics, Incorporated. Technically, HYgene is a silver-impregnated granular activated carbon. A layer of HYgene is placed on top (water inlet side) of the ion exchange softening resin inside the water conditioner. The top section of the filter bed is the area where excessive bacteria growth usually takes place, especially during non-flow periods when the water is not in use, such as overnight or when the unit is unused during vacation periods. Bacterial level in ion exchange resins is a transitory phenomenon which is markedly decreased after a period of flow or a regeneration cycle.

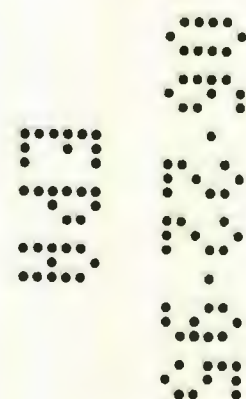
Q. What is the expected life of the HYgene Bacteriostatic Water Filter medium contained in the General Ionics Water Conditioning Unit?

A. The HYgene medium should be replaced in accordance with water conditioner model size as follows:

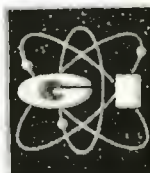
Softening Capacity	Tank Diameter	HYgene Content	Bacteriostatic Medium Life	
			Gallons	Family of 4
20 Kg.	~8 inch	2 lb.	75,000	1 year
40 Kg.	12 inch	4 lb.	150,000	2 years

Q. Are there any Environmental Protection Agency restrictions that I should know?

A. There are no restrictions or precautions for your concern. The EPA has, however, registered the General Ionics Bacteriostatic Water Conditioners for use on treated municipally supplied tap water, which precludes its use on well water.



QUESTIONS
&
ANSWERS
ABOUT



GENERAL IONICS
BACTERIOSTATIC
WATER
CONDITIONERS

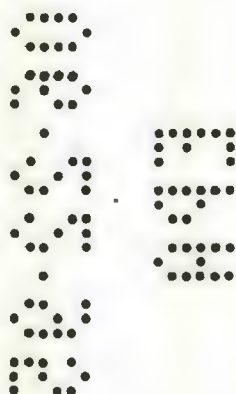


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P.O. BOX 99 • BRIDGEVILLE, PA. 15017
INTERNATIONAL WATER CONSULTANTS AND
EQUIPMENT MANUFACTURERS • MEMBER WATER
QUALITY ASSOCIATION

Printed in U.S.A. GIB-783



GENERAL IONICS Model IQ

BACTERIOSTATIC



GENERAL IONICS Model IQ Bacteriostatic

METER-CONTROLLED FULLY AUTOMATIC STAINLESS STEEL WATER CONDITIONER

General Ionics presents the first Bacteriostatic Water Conditioner that not only softens municipally-treated water but also inhibits the growth of bacteria within the filter media bed. Additionally, the Model IQ — the unit with a brain — features state-of-the-art Metered Regeneration Control that provides salt savings of up to 40% over conventional timers.

The Model IQ Control monitors the conditioned water you use, and then initiates a regeneration cycle only when the ion exchange mineral is near exhaustion.

With the IQ Regeneration Control there is no need for "vacation" or

"guest" switches. This "brain" automatically meters any increase or decrease in water usage, and therefore regenerates only when necessary. As a result, you realize savings three ways: (1) salt consumption, (2) water usage, and (3) sewage taxes.

The General Ionics Model IQ Bacteriostatic Water Conditioner gives you absolutely carefree convenience and reliable performance, plus the unique polishing of your water with the silver-impregnated activated carbon that removes objectionable tastes and odors.

The Water Conditioner with a brain gives you all these advantages:

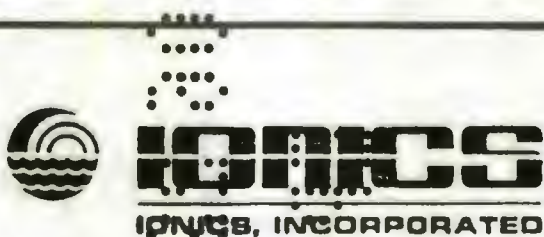
- Bacteriostatic feature inhibits

growth of bacteria within filter media bed while removing odors and tastes

- Meter-controlled regeneration for big savings
- Corrosion-resistant 6-cycle bronze control valve for trouble-free operation
- Beautifully polished chrome/nickel stainless steel mineral tank with a limited lifetime warranty
- High-density polypropylene brine tank with a 5-year limited warranty
- High-capacity S-759 resin for superior hardness removal as well as high recovery rates during regeneration

GENERAL IONICS — THE MAGIC NAME IN WATER CONDITIONING SINCE 1947

SPECIFICATION	MODEL NUMBER	
	IQ 0820-B	IQ 1240-B
Capacity (Grains)	20,000	40,000
Tank Size — Diameter by Height (Inches)	8 x 51	12 x 59
Salt Storage Capacity (Pounds)	250	200
Brine Tank Size — Diameter by Height (Inches)	18 x 30	18 x 30



MANUFACTURERS OF GENERAL IONICS WATER CONDITIONERS
P.O. BOX 99 • BRIDGEVILLE, PA 15017 (PITTSBURGH DISTRICT)
INTERNATIONAL WATER CONSULTANTS AND EQUIPMENT MANUFACTURERS
MEMBER WATER QUALITY ASSOCIATION

E.P.A.

Environmental Protection Agency

REGISTERED
No. 35900-3
No. 35900-9

**HYGENE® REPLACEMENT MEDIA
GENERAL IONICS® MODEL IQ0820B
BACTERIOSTATIC WATER CONDITIONER**

This product is designed to inhibit the growth of bacteria in the ion exchange softener filter media for municipally treated tap water to prolong the life of the filter.

KEEP OUT OF REACH OF CHILDREN

CAUTION

EPA REGISTRATION NO. 35900-3

EPA ESTABLISHMENT NO. 35900 PA 01

STORAGE OF HYGENE® MEDIA-----Store in closed container which excludes moisture and chemical fumes.

DISPOSAL OF SPENT MEDIA-----When content are exhausted, wrap in newspaper and discard in the trash.

DIRECTIONS FOR USE-----See enclosed instruction sheet.

ACTIVE INGREDIENT:

Silver as metallic 1.05%

INERT INGREDIENTS:

Activated Carbon..... 98.95%

NET WT: 2 lbs.

LOT No. _____

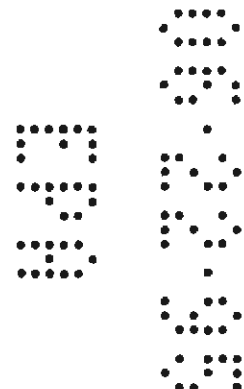
NET CONTENTS: One (1) Bacteriostatic Media Replacement only for General Ionics
Bacteriostatic Water Conditioner

IONICS, INCORPORATED, 3039 WASHINGTON PIKE, BRIDGEVILLE, PA 15017



IONICS

IONICS, INCORPORATED



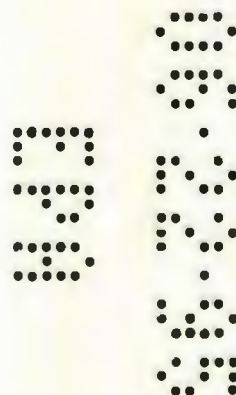
HYGENE MEDIA REPLACEMENT INSTRUCTIONS
FOR
GENERAL IONICS BACTERIOSTATIC WATER CONDITIONER

- This product is designed to remove objectionable tastes, odors, and color from municipally treated tap water.
- This product is designed to inhibit the growth of bacteria in the filter to prolong the life of the filter

FOR USE ON COLD WATER ONLY

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.



HYGENE TRANSFER PROCEDURE

TO REMOVE EXHAUSTED MEDIA

Remove cover from control valve.

Loosen flow control retainer screw on drain line and remove flow control housing and drain line from control valve body.

Replace the 1.5 gpm flow control button with a 2.4 gpm button.

Reinstall flow control housing and drain line to valve body. Tighten screw.

Depress red button on front of timer and turn black center knob clockwise to Backwash position. Allow unit to backwash until all exhausted HYGENE media is removed. Move bypass handle to Bypass position.

TO ADD NEW HYGENE MEDIA

1) Depress red button on front of timer. Turn black center knob to next cycle, Brine and Rinse position. Pull electrical plug.

2) Add new HYGENE recharge to transfer tank and fill tank with water.

3) Remove present injector assembly and brine tube from control valve and install the modified injector body, gasket and two screws provided. (For correct orientation, refer to drawing)

4) Attach 3/8" O.D. poly flow tubes as shown in drawing. (Headpiece on transfer tanks is marked "In" and "Out".)

5) Make sure single lever ball attached to modified injector is closed. (Lever turned 90° in reference to valve body)

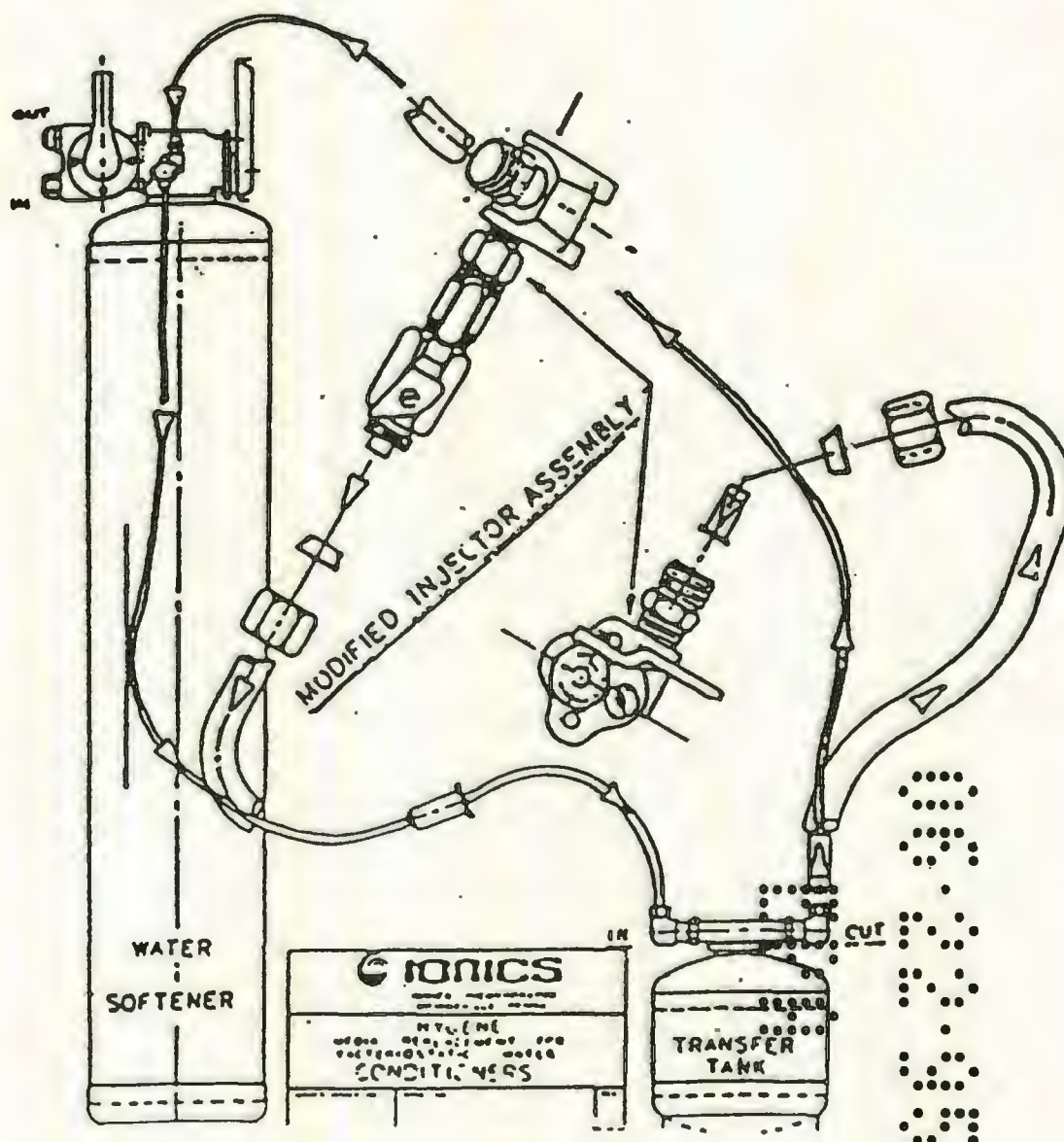
6) Invert stainless steel transfer tank to permit HYGENE media to suspend itself in water. Open single lever ball valve while tank is inverted or immediately after uprighting tank. This will eliminate the possibility of HYGENE media becoming packed in the bottom of the transfer tank.

7) Feed water will pass through the ball valve and poly flow tubing, entering the inlet at the top of the transfer tank. Push the new HYGENE media up the PVC dip tube, through the other poly flow tube and into the water softener. The new HYGENE media will locate itself on top of the water softener media bed. Since the poly flow tubing is natural in color, the new HYGENE media can be seen moving through the piece of poly flow tubing that is attached to the vertical adapter on the modified injector body. When this line becomes clear, slightly, agitate transfer tank to disturb possible remaining HYGENE in transfer tank. When line is clear, move bypass handle to Bypass position. Allow pressure in system to pass through the drain line. Leaving poly flow tubes attached for next transfer, remove modified injector body. Inspect and replace original injector assembly and safety brine valve. Remove the 2.4 gpm flow button from the drain line and replace with the original 1.5 gpm button. Connect drain line.

8) Depress red button on front of timer and move control valve to the Service position. Move bypass handle to Service position. Plug in cord and set timer to correct time of day. Open a cold water tap and run cold water for approximately 3 minutes.

TRANSFER EQUIPMENT

- I. Transfer Tank complete with #490 Headpiece, Dip Tube and necessary fittings. (completely assembled)
- II. Two, 5 ft. lengths of 3/8" O.D. Natural Poly Flo Tubing
- III. Plastic bag containing the following:
 - (1) 2.4 gpm Drain Line Flow Control Rubber Button
 - (3) Brass Insert Sleeves (one not required at 1/4" ball valve)
 - (1) Modified Transfer Injector Body with necessary fittings, completely assembled (Nozzle Orifice plugged)
 - (1) Injector Body Gasket
 - (2) Injector Screws 10-24 x 1 1/4"





Model EE Special Features

Directions For Use

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

For use on cold water only.

Energy Efficient Control

This fully automatic six-cycle valve with 12-day timer schedules regenerations at preset intervals. The day and the hour for regeneration, as well as the salt dosage, have been set at the time of installation by the installer. These settings have been carefully calculated according to your family needs and to get the maximum recovery of the resin while minimizing water usage. **Do Not Change These Settings Without First Consulting Your Dealer.**

Vacation Periods

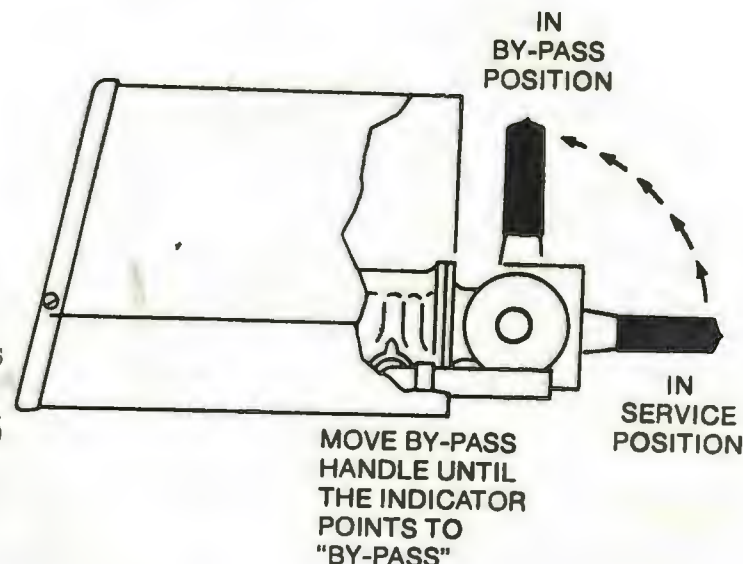
Why allow your water conditioner to continue regenerating while you are on vacation? It would be a waste of salt to recharge an already charged mineral bed. With your Energy Efficient General Ionics Model EE Water Conditioner, vacation time has been taken into account. Simply move the by-pass valve lever (see illustration on page 5 of this manual) until the indicator points to "by-pass". By doing so, the unit will continue to go through the preset regeneration cycles, but actually it will not regenerate. When you return home, move the by-pass valve lever back to the "service" position and you will again have conditioned water as before.

High Usage Demand/Weekend Guests

As mentioned previously, your General Ionics Model EE unit is set for your own needs. Higher than normal usage such as weekend guests will naturally place a greater demand for conditioned water on the unit. The method for manually regenerating the unit is covered on page 9. This "extra" regeneration will not interfere with the regular programmed cycle.

By-Pass Instruction

In case any problem should occur that cannot be immediately resolved, it is recommended to manually by-pass the unit as shown and call your authorized General Ionics dealer.



LIFE EXPECTANCY OF HYGENE BACTERIOSTATIC MEDIA

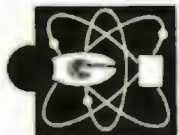
Model Nos. (EE or IQ)	Tank Diameter	HYgene Content	Bacteriostatic Medium Life Gallons	Family of 4
0820-B	8"	2 lb.	75,000	1 year
1240-B	11"	4 lb.	150,000	2 years

It is suggested that a water meter reading be noted at time of installation. Add to that reading the expected gallonage life of the Bacteriostatic medium from the above chart. Record what the water meter reading will be when replacement should be made.

Water meter reading at time of installation _____ Gallons

Expected life of Media (from above chart) + _____ Gallons

Water meter reading, media replacement _____ Gallons



Model IQ Special Features

Directions For Use

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

For use on cold water only.

Meter-Controlled Regeneration

The Model IQ control minimizes salt usage and water waste by accurately monitoring the conditioned water and then initiating a regeneration only when the S-759 mineral is near exhaustion. Six-cycle downflow brining assures accurate salting while the adjustable time regeneration program uses the minimum amount of water required per cycle.

In service a mechanical meter accurately monitors water usage. This feature eliminates the costly wasted capacity due to premature regenerations.

Vacation Periods

There is no need to be concerned about disconnections or adjustments on your Model IQ Water Conditioner before leaving your home for long periods of time. When no water is being used, the "brain" will simply remain idle for that period of time and be ready to monitor water usage when you return home.

High Usage Demand/Weekend Guests

The Model IQ Water Conditioner's "brain" will automatically recognize the increase in water usage and regenerate before running out of conditioner water. Unpredictable water demand is never a problem with the General Ionics Model IQ.

How To Set The Time Of Day

If you should have a power failure or want to adjust for Daylight Savings Time, follow these instructions:

Press and hold in the red button to disengage the drive gear.

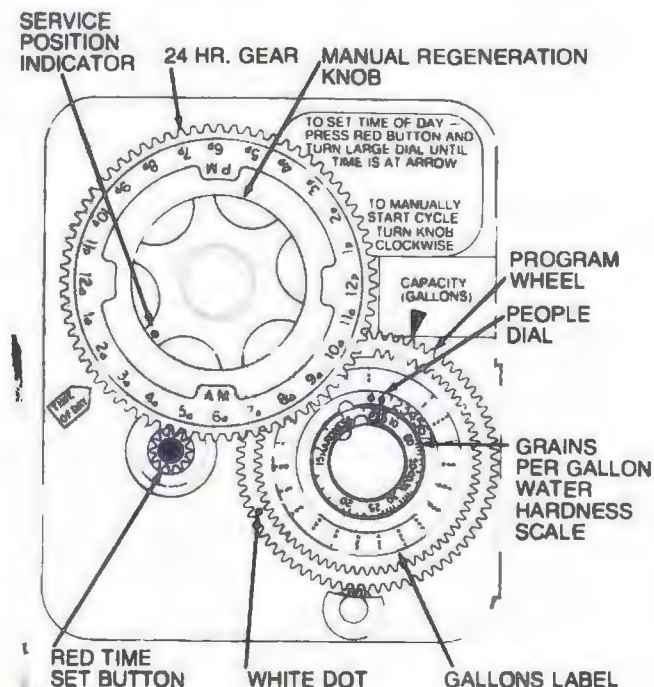
Turn the large gear until the actual time of day is opposite the time of day pointer.

Release the red button to engage the drive gear.

ACCEPTED
with COMMENTS
in EPA Letter D-1000

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How To Manually Regenerate Your Water Conditioner At Any Time

Turn the manual regeneration knob clockwise.

This slight movement of the manual regeneration knob engages the program wheel and starts the regeneration program.

The black center knob will make one revolution in the following three hours and stop in the position shown in the drawing.

Even though it takes three hours for this center knob to complete one revolution, the regeneration cycle of your unit might be set for only one-half of this time.

In any event, conditioned water may be drawn after rinse water stops flowing from the water conditioner drain line.

When To Add Salt

The brine tank has a capacity up to 250 lbs. of nugget or pellet salt. You can add salt whenever it is most convenient for you, but it is important to replenish the supply before the pellets reach the "add salt" level indicated by the label on the salt storage tank.


Bridging Or Caking

The salt platform in your brine tank has been engineered to eliminate salt bridging or caking. However, under certain atmospheric conditions these circumstances can occur and will prevent the salt from coming in contact with the water level. When your water seems to be hard, check the salt in the storage tank. If it appears to be bridging or caking, break it up with a short wooden stick. In doing so, be careful not to probe the full depth of the brine tank because you may damage the salt platform.

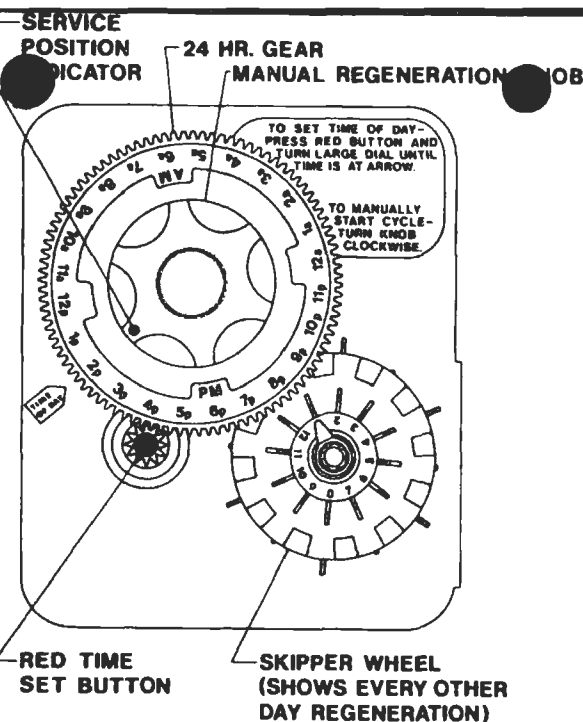
Bacteriostatic — An Ionics Exclusive

If your General Ionics Water Conditioner is an Environmental Protection Agency (EPA) Registered Bacteriostatic model, you have two unique added features. First, this unit inhibits the growth of bacteria within the S-759 ion exchange filter media bed. Second, it reduces and in many cases completely eliminates organic tastes, odors and colors from the water.

Inside the Bacteriostatic model water conditioner a layer of HYgene® silver-impregnated activated carbon (EPA-Registered Bacteriostatic Water Filter Media) is placed on top of the S-759 mineral. The silver acts as the inhibiting agent while the activated carbon adsorbs objectionable tastes, odors and colors.

 IT IS A VIOLATION OF FEDERAL LAW to use this product in a manner inconsistent with its labeling. Only use EPA Registered Hygene silver-impregnated Carbon replacement media in this unit. Use of any media material other than Hygene silver carbon manufactured by Ionics, Incorporated is a violation of the improper operation of the unit, and voids the manufacturer's warranty. For your protection, do not accept a replacement media unless it is factory-sealed with both the tape and label reading "Hygene" manufactured by Ionics, Incorporated.

EPA has restricted the Bacteriostatic models for use only on treated municipally supplied tap water, which precludes its use on well water.



How To Set The Time Of Day

If you should have a power failure or want to adjust for Daylight Savings Time, follow these instructions:

Press and hold in the red button to disengage the drive gear.

Turn the large gear until the actual time of day is opposite the time of day pointer.

Release the red button to engage the drive gear.

How To Manually Regenerate Your Water Conditioner At Any Time

Turn the manual regeneration knob clockwise.

This slight movement of the manual regeneration knob engages the program wheel and starts the regeneration program.

The black center knob will make one revolution in the following three hours and stop in the position shown in the drawing.

Even though it takes three hours for this center knob to complete one revolution, the regeneration cycle of your unit might be set for only one-half of this time.

In any event, conditioned water may be drawn after rinse water stops flowing from the water conditioner drain line.

Questions And Answers

Q. What is water conditioning?

A. Water conditioning is that branch of engineering that determines the chemical characteristics of a tap water supply, as it enters your home, and treats these characteristics so as to provide water more suitable and economical for household use.

Q. Why is it essential to improve water quality?

A. Beyond being an absolute necessity of life, water is an outstanding cleaning agent. The trouble is that nature does a lot of things with water long before you have a chance to use it in your laundry or at your kitchen sink. You get it, as it were, second hand. Therefore, improving your water quality by water conditioning is just as essential as any other home appliance.

Q. Does the conditioned water have a "different" taste?

A. Taste is difficult to define as no two people have the same sense of taste. A water conditioner will remove certain minerals and turbidity from the water, giving you a cleaner, better tasting water.

Q. Will conditioned water give a cleaner, brighter wash?

A. Yes. For best results, you should use the proper amount of laundering agent. Keep in mind a 60 to 80% soap saving can be achieved with conditioned water. Learn to use less laundering agent because none of the cleansing compound will be wasted as in hard water cleaning. The amount of laundering agent you use depends on:

- (1) its effectiveness,
- (2) the volume and temperature of water,
- (3) the size of the wash load, and
- (4) the type and amount of dirt and grime.

Q. What effect will conditioned water have on plumbing?

A. Before the water was conditioned, the hard water caused a scale build-up in the hot water pipes and water heater. Scale acts as an insulating material. In the water heater, scale reduces heat transmission, wastes fuel and often causes heating coil and tube failure. The installation of a water conditioner not only prevents further scale formation but will gradually remove previously formed scale deposits. A recent study indicates that softened water offers a saving of 23% in energy cost in the operation of a hot water heater.

Q. Are the minerals which a conditioner removes from hard water essential to health?

A. No. The quantity of minerals found in hard water are not essential to good health.

Q. Is the sodium in softened water harmful to people on restrictive diets?

A. Much depends on the strictness of the diet itself.

When the patient is on an extremely restrictive diet, he should drink neither hard nor softened water. Under these conditions he should have demineralized water, distilled water, or water known to be free of sodium for drinking and for the cooking of foods. Such patients are commonly hospitalized.

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Regeneration

Your General Ionics Water Conditioning unit consists of a tank filled with a premeasured amount of a special mineral called S-759, formulated especially for General Ionics equipment. On top of the tank is the control valve/timer, which works on the same principle as an electric clock. Alongside the unit is a storage tank which holds the salt and brine for the regeneration cycle.

Regeneration means recharging or recleaning the special S-759 mineral. It is important to know that the entire cycle is automatic and you will have nothing to do with it. The following steps are for your own enlightenment... and to demonstrate the thoroughness of the automatic cycle: 1. Backwashing, which reverses the action of the water, throws off the sediment (called turbidity) that has been filtered out of the water, and flushes it down the drain. 2. Salt, as brine, is injected into the unit to clean and revitalize the S-759 mineral. (The amount of salt used is controlled by a float valve, which operates the same as the float in the water tank of your toilet.) 3. Slow rinse. 4. Fast rinse. 5. Valve automatically returns to the service position to again supply you with good, conditioned water.

What Salt To Use

Salt is your water conditioner's fuel. Using the right fuel is as important here as it is to get the best performance from your car. It is strongly recommended to use only nugget or pellet type salt in your water conditioner. This type of salt is pure and free of undesirable insolubles. Nugget or pellet type water conditioner salt is available from your General Ionics dealer.

NOTE: Common rock salt is NOT recommended because much of it contains insolubles. The continued use of common rock salt will necessitate more frequent cleaning of the brine tank, or worse, it may cause a malfunction of the valving. However, specially processed water conditioner rock salt, as handled by your local dealer, may be used.



General Information

Your General Ionics Water Conditioner is completely automatic. It will provide an abundance of conditioned water with just an occasional addition of salt to the brine tank when the salt reaches the "add salt" level. Your unit was thoroughly tested at the factory before shipping, and again at the time of installation. The automatic timer is set to "regenerate" your water conditioner at night while you are sleeping. From experience, this is the best time because your water demand is lowest then and regeneration will not interfere with baths, washing clothes, etc. However, unconditioned water is available from all faucets during the regeneration cycle. With the General Ionics Water Conditioner you are never without water.

It is a good idea to wipe the unit occasionally and then apply a good coat of wax. This procedure will keep your water conditioner looking bright and clean for a lifetime.

In case some problem should arise, you can manually by-pass the unit by throwing one lever (see illustration on page 5). Then call your authorized General Ionics dealer. He has been trained in all phases of maintenance and repair work and will have the unit back in operation quickly. If there is not a General Ionics dealer in your vicinity, then contact another reliable water conditioning firm. Failing that, please write directly to the factory: Ionics, Incorporated, P.O. Box 99, Bridgeville, Pennsylvania 15017, Attention: Service Department.

NOTE: Whenever you correspond with the factory, be sure to include the model and serial number written on the inside back cover of this booklet. Explain the problem as best you can. With this information factory technicians can handle the problem promptly with little chance of error.

In establishing a salt-free diet for patients, physicians should not overlook the fact that even hard water may contain appreciable amounts of sodium. To determine the amount a complete analysis of the water is necessary.

Q. How much sodium is added to softened water?

A. Each grain per gallon (GPG) hardness removed adds 7.875 milligrams (mg) of sodium to a liter of water, which is approximately one quart. The average daily sodium intake of an adult individual is 3,000 to 4,000 milligrams and the average fluid intake is 1.6 to 2.0 liters per day. A liter is slightly more than four 8-ounce glasses of water. Two liters per day or 8.4 eight-ounce glasses of water amounts to a total sodium intake from a source of softened 8 GPG water of 125.16 milligrams. This is approximately 3% of the average daily sodium intake.

There is another way to answer this question, and that depends on the hardness of your raw water. The following table shows the additional amount of sodium consumed by drinking ONE quart of softened water.

Initial Water Hardness	Sodium Added By Softening
5 Grains/Gallon	37.5 Milligrams/Quart
10 Grains/Gallon	75.0 Milligrams/Quart
20 Grains/Gallon	150.0 Milligrams/Quart
40 Grains/Gallon	300.0 Milligrams/Quart

Q. How does this sodium content of conditioned water compare to sodium found in common foods?

A. The data in the following table demonstrate the usual range of sodium in common foods.

Food	Amount	Milligrams Of Sodium
Milk	2 Cups	226
Bread	2 Slices	322
Corn Flakes	1 Ounce	260
Tomato Juice	4 Ounces	504
Chili	1 Cup	1,194
Tomato Soup	1 Cup	932
Beef Broth	1 Cup	1,152
Frankfurter	1 Medium	610
Hamburger (Fast Food)	1/4 Pound	1,510
Catsup	1 Tablespoon	204
Canned Baked Beans	3/4 Cup	1,130
Canned Asparagus	1/2 Cup	560
Frozen Peas	1/2 Cup	295
Cottage Cheese	4 Ounces	457
Parmesan Cheese	1 Ounce	528
Pretzels	1/4 Pound	1,925

It is important to note that about 2/3 of the daily water intake of any individual is through food and only about 1/3 from water itself.

General Ionics Water Conditioner LIMITED WARRANTY

This should be kept in a safe place by the owner.

GENERAL CONDITIONS

Ionics, Incorporated, Bridgeville, Pa., warrants that the General Ionics Water Conditioner to which this limited warranty applies is free from defects in material and workmanship. The attached limited warranty agreement card must be filled out, mailed to, and received by Ionics, Incorporated, within two (2) weeks of the date of installation of the equipment for this limited warranty to be effective.

This limited warranty is extended directly by the manufacturer to the owner, and is the sole warranty applicable. Any other warranties or guarantees, oral or written, expressed or implied, are not recognized.

LIMITED LIFETIME WARRANTY ON MINERAL TANK

This General Ionics Water Conditioning unit carries a limited warranty on the mineral tank. Any such mineral tank that becomes unusable because of leakage, corrosion, or rupture will be replaced or repaired at the option of Ionics, Incorporated. The defective tank must be returned to Ionics, Incorporated, transportation prepaid, within 30 days from date of failure for this limited warranty to be effective.

ELECTRICAL PARTS — LIMITED WARRANTY

Electrical components are warranted for a period of one (1) year of date of installation, provided the defective part is returned, prepaid to Ionics, Incorporated. Valve and/or control valve parts are warranted for a period of five (5) years from date of installation. Any such components found to be defective will be replaced or repaired, within five (5) years of date of installation, provided the defective part is returned, prepaid, to Ionics, Incorporated.

SALT STORAGE TANK — LIMITED WARRANTY

There is a five (5) year warranty on salt storage tank. Any such storage tank that becomes unusable because of leakage or corrosion will be replaced or repaired at the option of Ionics, Incorporated. The original tank must be returned to Ionics, Incorporated, transportation prepaid, within 30 days from date of failure for this limited warranty to be effective.

Salt Storage Tank components are warranted for a period of one (1) year of date of installation, provided the defective parts are returned prepaid to Ionics, Incorporated.

ION EXCHANGE RESIN — LIMITED WARRANTY

The S-759 high capacity ion exchange resin housed in the mineral tank carries a limited warranty of one (1) year. A resin sample must be sent to Ionics, Incorporated for testing prior to its replacement under warranty. If the resin is found to be incapable of softening the water because of a flaw in its manufacture, it will be replaced. Warranty does not apply to resin which has been frozen, has become fouled by iron due to improper maintenance, or is found to be ineffective due to any other outside form of neglect.

Congratulations

Ionics, Incorporated welcomes you to a new, carefree way of life with conditioned water. You can take pride and satisfaction knowing that you own the very best. We are proud that you have selected the General Ionics deluxe quality Water Conditioner for your home. Your sound judgment is supported by the wide acceptance received for these units throughout the world. More and more quality conscious homeowners are purchasing General Ionics Water Conditioning equipment because of its superior performance and its premium quality workmanship.

The following pages of this booklet will introduce you to your new General Ionics Water Conditioner by explaining operation, care and maintenance. In addition, the booklet provides recommendations for getting the very best performance from your unit as well as answers to commonly asked questions.

Sheldon Polansky

Vice President
Household Water Conditioning
Ionics, Incorporated

IMPORTANT

This booklet contains your Owner Limited Warranty Card. Be sure that it is filled in and mailed to the factory within two weeks of installation. Failure to do so will result in voiding the warranty.

Your General Ionics Dealer is...

BACTERIOSTATIC MODELS — SILVER CARBON REPLACEMENT

IT IS A VIOLATION OF FEDERAL LAW to replace the EPA-registered silver-impregnated carbon media in any Ionics bacteriostatic unit with anything other than HYgene[®] silver carbon manufactured by Ionics, Incorporated. The installation of any other media will void this warranty. For your protection, do not accept a replacement media unless it is factory-sealed with both the tape and label reading "HYgene[®]" manufactured by Ionics, Incorporated.

EXTENT OF LIMITED WARRANTY

Under terms of this limited warranty, all tanks are replaced or repaired by Ionics, Incorporated on the basis of F.O.B. manufacturer's plant. Transportation, labor, installation, and service costs are to the customer's account and are not covered by this limited warranty.

LIMITATIONS OF WARRANTY

This limited warranty shall be effective only if the Water Conditioner covered by the limited warranty is properly installed in accordance with installation and operating instructions furnished with the equipment by Ionics, Incorporated, and in accordance with the local plumbing codes and ordinances.

This limited warranty shall be void if any part of the Water Conditioner has been subjected to accident, alteration, abuse, neglect or freezing.

This limited warranty shall not be assignable by the original purchaser and applies only to the original equipment.

Model Number _____ Tank Number _____

Date Installed _____

Dealer _____

Address _____

Telephone _____



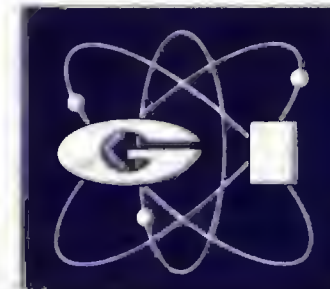
IONICS

IONICS, INCORPORATED

P.O. Box 99 • Bridgeville, PA 15017

HOMEOWNER'S MANUAL

GENERAL IONICS WATER CONDITIONER Model IQ and Model EE



IONICS

IONICS, INCORPORATED

P.O. Box 99
Bridgeville, PA 15017

INTERNATIONAL WATER CONSULTANTS AND
EQUIPMENT MANUFACTURERS • MEMBER
WATER QUALITY ASSOCIATION

IONICS, INCORPORATED



GENERAL IONICS BACTERIOSTATIC WATER CONDITIONERS

ACCEPTED
with COMMENTS
in EPA Letter Dated

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Q. First, what is a Bacteriostatic Water Conditioner?

A. A Bacteriostatic Water Conditioner is one which not only softens municipally treated water, but also inhibits the growth of bacteria within the ion exchange softening filter medium.

Q. Is there a need to inhibit the growth of bacteria in potable (drinking) water?

A. Since potable water can, by law, contain a number of harmless bacteria indigenous to municipally treated water, the potential for a build-up or growth of these bacteria trapped within the ion exchange softening filter medium does exist.

Why is there a build-up of bacteria in a water conditioning unit?

A. The low level of bacteria in the municipally treated water along with organic compounds normally present in a water supply become trapped in the filter media bed. After a period of time the filter bed contains a considerable number of bacteria and, in the presence of the organic compounds which become a source of nutrients for bacteria, the filter then becomes a breeding place for bacterial growth.

Q. What is in the Bacteriostatic Water Conditioner that inhibits the growth of bacteria within the filter medium?

A. The inhibiting agent is HYgene—an Environmental Protection Agency Registered Bacteriostatic Water Filter Medium. It is the exclusive property of Ionics, Incorporated. Technically, HYgene is a silver-impregnated granular activated carbon. A layer of HYgene is placed on top (water inlet side) of the ion exchange softening resin inside the water conditioner. The top section of the filter bed is the area where excessive bacteria growth usually takes place, especially during non-flow periods when the water is not in use, such as overnight or when the unit is unused during vacation periods. Bacterial level in ion exchange resins is a transitory phenomenon which is markedly decreased after a period of flow or a regeneration cycle.

Q. What is the expected life of the HYgene Bacteriostatic Water Filter medium contained in the General Ionics Water Conditioning Unit?

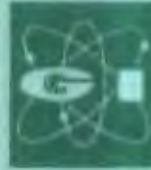
A. The HYgene medium should be replaced in accordance with water conditioner model size as follows:

Softening Capacity	Tank Diameter	HYgene Content	Bacteriostatic Medium Life	
			Gallons	Family of 4
20 Kg.	8 inch	2 lb.	75,000	1 year
40 Kg.	12 inch	4 lb.	150,000	2 years

Q. Are there any Environmental Protection Agency restrictions that I should know?

A. There are no restrictions or precautions for your concern. The EPA has, however, registered the General Ionics Bacteriostatic Water Conditioners for use on treated municipally supplied tap water, which precludes its use on well water.

**QUESTIONS
&
ANSWERS
ABOUT**



**GENERAL IONICS
BACTERIOSTATIC
WATER
CONDITIONERS**



IONICS

IONICS, INCORPORATED

P.O. BOX 99 • BRIDGEVILLE, PA 15017

INTERNATIONAL WATER CONSULTANTS AND
EQUIPMENT MANUFACTURERS • MEMBER WATER
QUALITY ASSOCIATION

GENERAL IONICS Model IQ Bacteriostatic

METER-CONTROLLED FULLY AUTOMATIC STAINLESS STEEL WATER CONDITIONER

General Ionics presents the first Bacteriostatic Water Conditioner that not only softens municipally-treated water but also inhibits the growth of bacteria within the filter media bed. Additionally, the Model IQ — the unit with a brain — features state-of-the-art Metered Regeneration Control that provides salt savings of up to 40% over conventional timers.

The Model IQ Control monitors the conditioned water you use, and then initiates a regeneration cycle only when the ion exchange mineral is near exhaustion.

With the IQ Regeneration Control there is no need for "vacation" or

"guest" switches. This "brain" automatically meters any increase or decrease in water usage, and therefore regenerates only when necessary. As a result, you realize savings three ways: (1) salt consumption, (2) water usage, and (3) sewage taxes.

The General Ionics Model IQ Bacteriostatic Water Conditioner gives you absolutely carefree convenience and reliable performance, plus the unique polishing of your water with the silver-impregnated activated carbon that removes objectionable tastes and odors.

The Water Conditioner with a brain gives you all these advantages:

- Bacteriostatic feature inhibits

growth of bacteria within filter media bed while removing odors and tastes

- Meter-controlled regeneration for big savings
- Corrosion-resistant 6-cycle bronze control valve for trouble-free operation
- Beautifully polished chrome/nickel stainless steel mineral tank with a limited lifetime warranty
- High-density polypropylene brine tank with a 5-year limited warranty
- High-capacity S-759 resin for superior hardness removal as well as high recovery rates during regeneration

GENERAL IONICS — THE MAGIC NAME IN WATER CONDITIONING SINCE 1947

SPECIFICATION	MODEL NUMBER	
	IQ 0820-B	IQ 1240-B
Capacity (Grains)	20,000	40,000
Tank Size — Diameter by Height (Inches)	8 x 51	12 x 59
Salt Storage Capacity (Pounds)	250	200
Brine Tank Size — Diameter by Height (Inches)	18 x 30	18 x 30

ACCEPTED
with COMMENTS
in EPA Letter Dated:

MAR 13 1995

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
amended, or the pesticide
registered under EPA Reg. No.

35900-3



IONICS

IONICS, INCORPORATED

MANUFACTURERS OF GENERAL IONICS WATER CONDITIONERS
P.O. BOX 99 • BRIDGEVILLE, PA 15017 (PITTSBURGH DISTRICT)
INTERNATIONAL WATER CONSULTANTS AND EQUIPMENT MANUFACTURERS
MEMBER WATER QUALITY ASSOCIATION

E.P.A.

Environmental Protection Agency

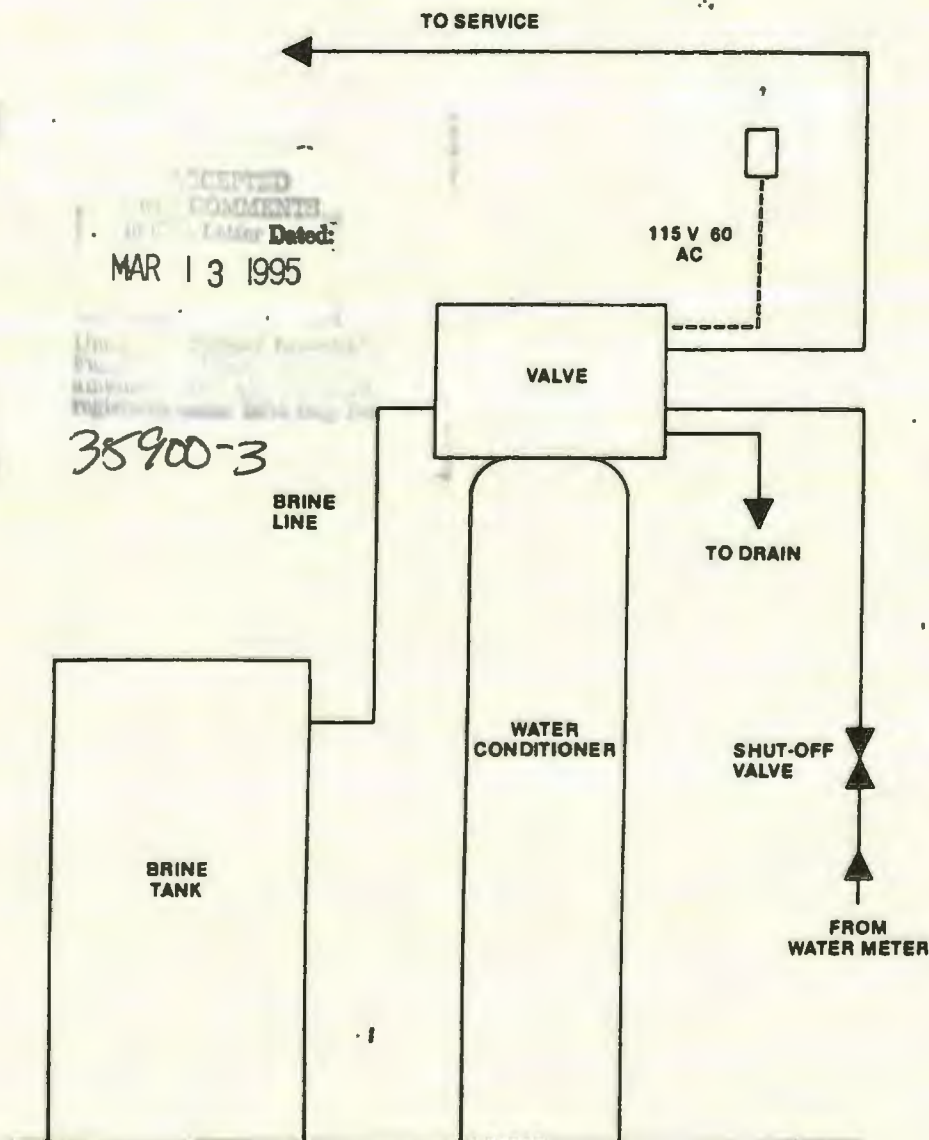
REGISTERED
No. 35900-3
No. 35900-9

GENERAL IONICS Model IQ

BACTERIOSTATIC



TYPICAL INSTALLATION FOR GENERAL IONICS BACTERIOSTATIC WATER CONDITIONER



INSTALLATION INSTRUCTIONS

GENERAL CLASSIFICATION: It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

For use on cold water only.

1. **Select Location**—The location selected must be convenient for drain facilities, electrical outlet and convenient for servicing and adding salt.
2. **Unpacking**—The Bacteriostatic Water Conditioner has been shipped complete in two cartons.
One carton contains the mineral tank which is preloaded with gravel bed, high capacity ion exchange resin and HYgene Bacteriostatic Water Filter Media. The control valve is mounted on top of this tank.
The second carton contains the salt storage tank and its components.
3. Turn main water supply off and drain system.
4. Cut the main supply line and remove approximately 6 inches of existing plumbing.
5. Remove control face plate and shroud. Place the mineral tank on the three plastic leveling legs and level.
6. Move bypass lever so indicator points to bypass position. Connect the main inlet line to the opening in the valve marked "In"; Connect the house service line to the opening marked "Outlet"; Connect the drain line, providing a minimum of 2" air gap between end of pipe and drain.
7. Turn main supply on. Customer will have tap water while installation is being completed.
8. Install salt storage tank. Assemble brine valve—connect brine line to control valve—add water to the salt storage tank. Add salt.
9. (a) Move bypass lever until indicator points to service position and then open a cold water faucet at kitchen sink or stationary tub to expel air. When there is a steady flow of water at the faucet, continue running for 15 minutes at flow rate indicated in Table I [Step 9 (a)].
(b) Press and hold the red button on the timer. This disengages the drive gear. Turn the black knob on the large cycle dial to backwash position to expell air compressed in the unit. When there is a steady flow of water at the drain, continue running for 10 minutes at flow rate indicated in Table I [Step 9 (b)].
(c) Again press and hold the red button to disengage the drive gear. Turn black knob and cycle dial to service position. Again open cold water tap at the kitchen sink or stationary tub. Continue running for 10 minutes at flow rate indicated in Table I [Step 9 (c)]. See note following Table I. Unit is now in service.

TABLE I
INSTALLATION FLOW RATES PRIOR TO
IN-SERVICE USE

Model Nos. (EE or IQ)	Step 9 (a) Service	Step 9 (b) Backwash	Step 9 (c) Service
0820-B	3 GPM/15 min.	1.5 GPM/10 min.	8 GPM/10 min.
1240-B	6 GPM/15 min.	3.0 GPM/10 min.	10.9 GPM/10 min.

NOTE: If flow rate in Step 9 (c) cannot be achieved due to low line pressure, run water a maximum flow until equivalent gallonage is reached.

TABLE II
LIFE EXPECTANCY OF HYGENE
BACTERIOSTATIC MEDIA

Model Nos. (EE or IQ)	Tank Diameter	HYgene Content	Bacteriostatic Medium Life Gallons	Family of 4
0820-B	8"	2 lb.	75,000	1 year
1240-B	11"	4 lb.	150,000	2 years

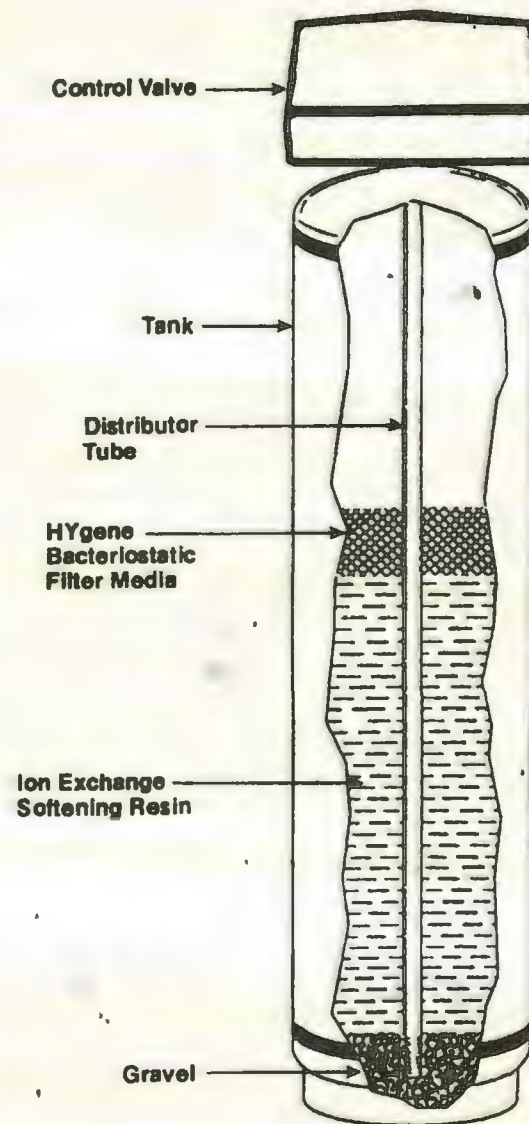
It is suggested that a water meter reading be noted at time of installation. Add to that reading the expected gallonage life of the Bacteriostatic medium from the above chart. Record what the water meter reading will be when replacement should be made.

Water meter reading at time of installation _____ Gallons

Expected life of Media (from above chart) + _____ Gallons

Water meter reading, media replacement _____ Gallons

GENERAL IONICS BACTERIOSTATIC WATER CONDITIONERS



**GENERAL IONICS®
MODEL IQ0820B
BACTERIOSTATIC WATER CONDITIONER
WITH HYGENE®**

**Inhibits the growth of bacteria within the ion exchange softener
filter medium for municipally treated water.**

KEEP OUT OF REACH OF CHILDREN

CAUTION:

EPA Reg. No. 35900-3 EPA Est. No. 35900 PA 01

**Storage of HYgene® Material: Store in closed container which excludes moisture
and chemical fumes.**

Active Ingredient: Silver as metallic 0.07%

Inert Ingredients: 99.93%

Total 100.00%

Directions For Use: See Homeowner's Manual

**Disposal Of Spent Media: Remove HYgene® media from top of filter bed,
wrap in paper, and discard with trash.**

Net Contents: One (1) Bacteriostatic Water Conditioner with HYgene®

Another fine product by the manufacturers of General Ionics Water Conditioning Equipment



IONICS
IONICS, INCORPORATED

3039 Washington Pike, Bridgeville, PA 15017

**ACCEPTED
with COMMENTS
in EPA Letter D-100**

MAR 13 1995


**Under the Federal Insecticide,
Fungicide, and Rodenticide Act
amended by the pesticide
registrations under FIFRA Reg. No.**

35900-3

HYGENE MEDIA REPLACEMENT INSTRUCTIONS
FOR
GENERAL IONICS BACTERIOSTATIC WATER CONDITIONER

- . Inhibits the growth of bacteria in the ion exchange softener filter media
- . Removes objectionable tastes, odors, and color from municipally treated water

FOR USE ON COLD WATER ONLY



It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

ACCEPTED
with COMMENTS
in EPA Letter Dated:

MAR 13 1995

Un... icide,

PA Reg. No.

35900-3

REV. 2/1/94

HYGENE TRANSFER PROCEDURE

ACCEPTED

with CHM-100 ES
by CMAA Control Group:

MAR 13 1995

TO REMOVE EXHAUSTED MEDIA

Remove cover from control valve.

Loosen flow control retainer screw on drain line and remove flow control housing and drain line from control valve body.

Replace the 1.5 gpm flow control button with a 2.4 gpm button.

Reinstall flow control housing and drain line to valve body. Tighten screw.

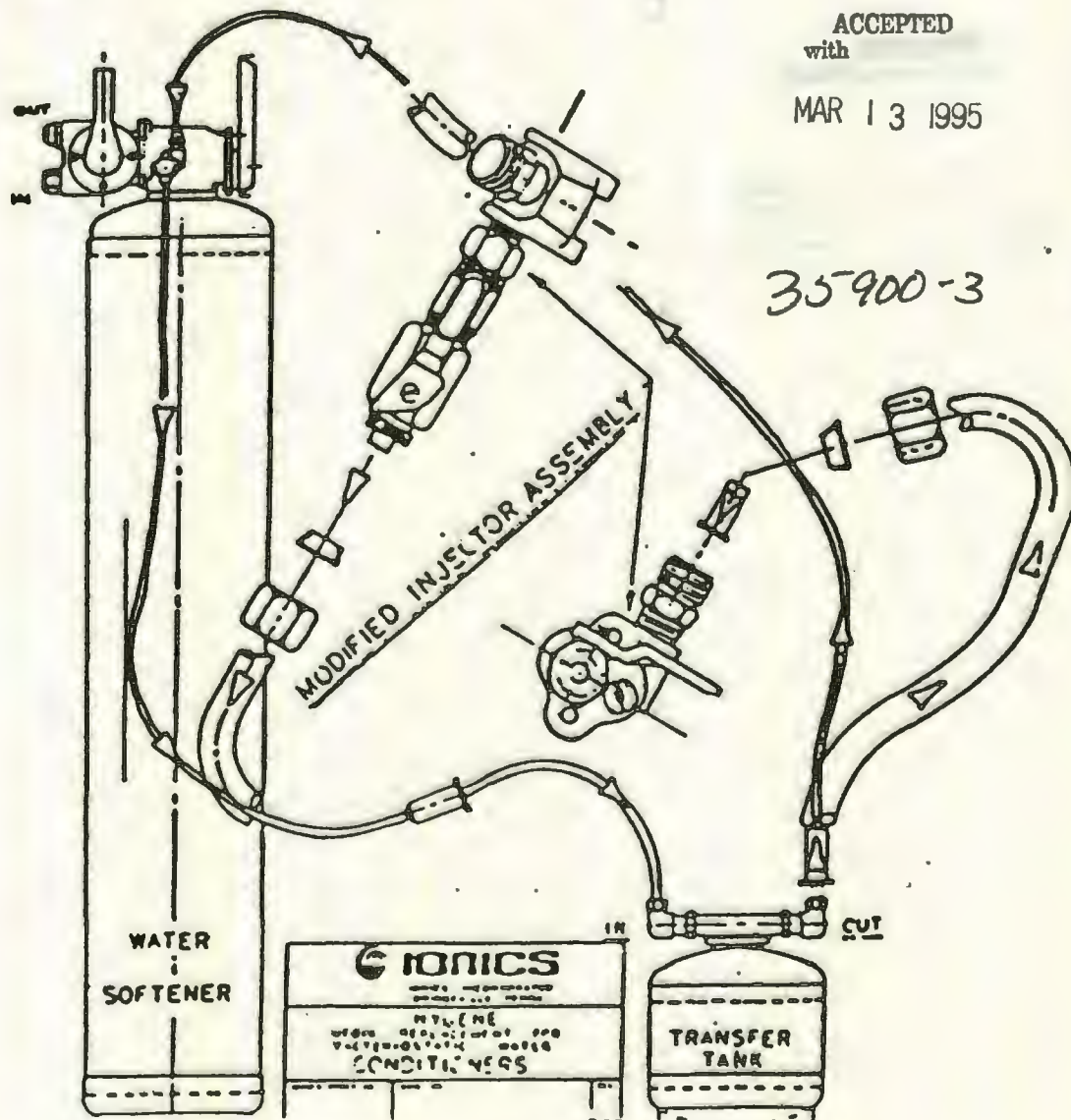
Depress red button on front of timer and turn black center knob clockwise to Backwash position. Allow unit to backwash until all exhausted HYGENE media is removed. Move bypass handle to Bypass position.

TO ADD NEW HYGENE MEDIA

- 1) Depress red button on front of timer. Turn black center knob to next cycle, Brine and Rinse position. Pull electrical plug.
- 2) Add new HYGENE recharge to transfer tank and fill tank with water.
- 3) Remove present injector assembly and brine tube from control valve and install the modified injector body, gasket and two screws provided. (For correct orientation, refer to drawing)
- 4) Attach 3/8" O.D. poly flow tubes as shown in drawing. (Headpiece on transfer tanks is marked "In" and "Out".)
- 5) Make sure single lever ball attached to modified injector is closed. (Lever turned 90° in reference to valve body)
- 6) Invert stainless steel transfer tank to permit HYGENE media to suspend itself in water. Open single lever ball valve while tank is inverted or immediately after uprighting tank. This will eliminate the possibility of HYGENE media becoming packed in the bottom of the transfer tank.
- 7) Feed water will pass through the ball valve and poly flow tubing, entering the inlet at the top of the transfer tank. Push the new HYGENE media up the PVC dip tube, through the other poly flow tube and into the water softener. The new HYGENE media will locate itself on top of the water softener media bed. Since the poly flow tubing is natural in color, the new HYGENE media can be seen moving through the piece of poly flow tubing that is attached to the vertical adapter on the modified injector body. When this line becomes clear, slightly agitate transfer tank to disturb possible remaining HYGENE in transfer tank. When line is clear, move bypass handle to Bypass position. Allow pressure in system to pass through the drain line. Leaving poly flow tubes attached for next transfer, remove modified injector body. Inspect and replace original injector assembly and safety brine valve. Remove the 2.4 gpm flow button from the drain line and replace with the original 1.5 gpm button. Connect drain line.
- 8) Depress red button on front of timer and move control valve to the Service position. Move bypass handle to Service position. Plug in cord set and set timer to correct time of day. Open a cold water tap and run cold water for approximately 3 minutes.

TRANSFER EQUIPMENT

1. Transfer Tank complete with #490 Headpiece, Dip Tube and necessary fittings. (completely assembled)
- II. Two, 5 ft. lengths of 3/8" O.D. Natural Poly Flo Tubing
- III. Plastic bag containing the following:
 - (1) 2.4 gpm Drain Line Flow Control Rubber Button
 - (3) Brass Insert Sleeves (one not required at 1/4" ball valve)
 - (1) Modified Transfer Injector Body with necessary fittings, completely assembled (Nozzle Orifice plugged)
 - (1) Injector Body Gasket
 - (2) Injector Screws 10-24 x 1 1/4"



**HYGENE® REPLACEMENT MEDIA
GENERAL IONICS® BACTERIOSTATIC
WATER CONDITIONER**

Inhibits the growth of bacteria within the ion exchange softener
filter media from municipally treated tap water.

CAUTION

KEEP OUT OF REACH OF CHILDREN

STORAGE OF HYGENE® MEDIA: Store in closed container which
excludes moisture and chemical fumes.

DIRECTIONS FOR USE: See enclosed instruction sheet.

DISPOSAL OF SPENT MEDIA: Retain shipping carton and plastic
liner for disposing of exhausted filter media with trash.

ACTIVE INGREDIENT

Silver as Metallic 1.05%

INERT INGREDIENT

Activated Carbon 98.95%

NET CONTENTS: One (1) Bacteriostatic Media Replacement only for
General Ionics Bacteriostatic Water Conditioner.

<u>MODEL NUMBER</u>	<u>EPA Reg.</u>	<u>NET WEIGHT</u>
X IQ 0820-B	No.35900-3	2.0 lbs.
IQ 0820-B		

EPA Est. No. 35900 PA 1

LOT NO. _____

Another fine product by the manufacturers of General Ionics Water Conditioning Equipment



IONICS
IONICS, INCORPORATED

3039 Washington Pike Bridgeville, Pa. 15017

ACCEPTED

MAR 13 1995

35900-3

DATE OUT: _____

SUBJECT: PRODUCT CHEMISTRY REVIEW OF:
A MANUFACTURING-USE [] OR AN END-USE PRODUCT [✓]
DP Barcode 211585 Reg. No. or File Symbol No. 35400-3

TO: (PM Team Reviewer)
PM Team No: 31 *Walter Francis / Karen Leary*

FROM: (Chemist/Date) *Anna Skaper 2-9-95*
Product Chemistry Review Section
Registration Support Branch/RD (WH705W)

THRU: Harold Podall, Ph.D., Section Head *HP 2/5/95*
Registration Support Branch/RD (WH7505W)

SUMMARY OF INFORMATION REVIEWED AND FINDINGS

This submission is for two different products. One is for "General Ionics Model IG 0280B Bacteriostatic Water Conditions" and the other one is for "Hygene Replacement Media for General Ionics Bacteriostatic Water Conditions."

Both Confidential Statements of Formula dated 4-11-94 are in compliance with PR Notice 91-2, agree with the label and are acceptable.

Both label ingredient statements are in compliance with PR Notice 91-2, agree with the Confidential Statements of Formula, and label claims are nominal concentration and both are acceptable.

Anna Skaper
2-9-95

PRODUCT CHEMISTRY REVIEW OF MP ☐ EP ☒
 DP BARCODE No.: D211585 REG./File Symbol No.: 35900-3
 PRODUCT NAME: General Ionics Model IQ 0820B Bacteriostatic Water
Conditions

1. Reviewer: Anna Skopars 2. Company: Ionics, Inc.
3. Type of Submission: Registration ☐ Reregistration ☒
 New ☐ Resubmission ☐ Amendment ☐ "ME-TOO" ☐
 Alternate Formulation ☐ Experimental Use Permit ☐
 Other (Specify) _____
4. If "Me-TOO" Registration, this product is ☐ is not ☐
 similar or substantially similar to EPA's Reg. No.: _____
- If not, comment in Confidential Appendix A on the differences between the registered and the new source where significant.

CONFIDENTIAL STATEMENT OF FORMULA

5. Type of formulation and the sources of active ingredients:
- Non-integrated formulation system.....☒
 - Are all technical grade active ingredients used registered?
 • yes ☐ • no ☐, If no, specify _____
 - Integrated formulation system.....☐
6. Clearance of intentionally added ingredients in the formulation for the intended use (indicate in the Confidential Appendix those that are not cleared; the PC Codes should be provided by the chemist on the CSF for those that are cleared):
- 6(a) Formulation intended for food use under 40CFR§180.1001:
 • yes ☐ • no ☐ • Some are cleared, others are not ☐
 Cleared under list: • c ☐ • d ☐ • e ☐
 Are there any limitations for use as an inert under 40CFR§180.1001?
 • yes ☐ • no ☐, If yes, specify N/A
- 6(b) Formulation intended for non-food use:
 • yes ☒ • no ☐ • Some are cleared, others are not ☐
- 6(c) Clearance by the FDA of certain formulations under 21CFR§170 to 199. Examples: (a) indirect food additives, such as food contact surface sanitizers; adhesives, coatings, paper and paperboard products that may contact food in packaging or holding; and (b) substances generally recognized as safe (GRAS).

PRODUCT CHEMISTRY REVIEW OF MP ☐ EP ☒
 DP BARCODE No.: 7211585 .REG./File Symbol No.: 35900-3
 PRODUCT NAME: Hygiene Replacement Media for General Ionics
Bacteriostatic Water Conditioner.

1. Reviewer: Anna Skapars 2. Company: Ionics, Inc.
3. Type of Submission: Registration ☐ Reregistration ☒
 New ☐ Resubmission ☐ Amendment ☐ "ME-TOO" ☐
 Alternate Formulation ☐ Experimental Use Permit ☐
 Other (Specify) _____
4. If "Me-TOO" Registration, this product is ☐ is not ☐
 similar or substantially similar to EPA's Reg. No.: _____
- If not, comment in Confidential Appendix A on the differences between the registered and the new source where significant.

CONFIDENTIAL STATEMENT OF FORMULA

5. Type of formulation and the sources of active ingredients:
- Non-integrated formulation system.....☒
 - Are all technical grade active ingredients used registered?
 • yes ☐ • no ☐ , If no, specify _____
 - Integrated formulation system.....☐
6. Clearance of intentionally added ingredients in the formulation for the intended use (indicate in the Confidential Appendix those that are not cleared; the PC Codes should be provided by the chemist on the CSF for those that are cleared):
- 6(a) Formulation intended for food use under 40CFR§180.1001:
 • yes ☐ • no ☐ • Some are cleared, others are not ☐
 Cleared under list: • c ☐ • d ☐ • e ☐
 Are there any limitations for use as an inert under 40CFR§180.1001?
 • yes ☐ • no ☐ , If yes, specify N/A
- 6(b) Formulation intended for non-food use:
 • yes ☒ • no ☐ • Some are cleared, others are not ☐
- 6(c) Clearance by the FDA of certain formulations under 21CFR§170 to 199. Examples: (a) indirect food additives, such as food contact surface sanitizers; adhesives, coatings, paper and paperboard products that may contact food in packaging or holding; and (b) substances generally recognized as safe (GRAS).

anna

DP BARCODE: D211585

CASE: 012963
SUBMISSION: S480970

DATA PACKAGE RECORD
BEAN SHEET

DATE: 02/02/95
Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: REGISTRATION ACTION: 675 RESUBMISSION
RANKING : 10 POINTS ()
CHEMICALS: 072501 Silver

00.0700%

ID#: 035900-00003 GENERAL IONICS MODEL IQ0820B BACTERIOSTATIC WATER CONDI
COMPANY: 035900 IONICS, INCORPORATED
PRODUCT MANAGER: 31 WALTER FRANCIS 703-305-6661 ROOM: CM2 248
PM TEAM REVIEWER: KAREN LEAVY 703-305-6966 ROOM: CM2 268
RECEIVED DATE: 01/13/95 DUE OUT DATE: 07/12/95

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 211585 EXPEDITE: N DATE SENT: 02/02/95 DATE RET.: / /
CHEMICAL: 072501 Silver
DP TYPE: 001 Submission Related Data Package

CSF: Y LABEL: Y
ASSIGNED TO DATE IN DATE OUT ADMIN DUE DATE: 05/03/95
DIV : RD / / / / NEGOT DATE: / /
BRAN: RSB / / / / PROJ DATE: / /
SECT: PCRS / / / /
REVR : *Anna Skapars* / / / /
CONTR: *2-9-95* / / / /

* * * DATA REVIEW INSTRUCTIONS * * *

Please review the revised Confidential Statement of Formula
and Product Labeling submitted in response to the Silver
RED.
Attn: Anna Skapars

* * * DATA PACKAGE EVALUATION * * *

No evaluation is written for this data package

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL
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DP BARCODE: D211585

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SUBMISSION: S480970

DATA PACKAGE RECORD
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Page 1 of 1

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DP TYPE: 001 Submission Related Data Package

CSF: Y LABEL: Y

ASSIGNED TO	DATE	IN	DATE	OUT	ADMIN DUE DATE: 05/03/95
DIV : RD	/	/	/	/	NEGOT DATE: / /
BRAN: RSB	/	/	/	/	PROJ DATE: / /
SECT: PCRS	/	/	/	/	
REVR :	/	/	/	/	
CONTR:	/	/	/	/	

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No evaluation is written for this data package

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DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL
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DP BARCODE: D211585

CASE: 012963
SUBMISSION: S480970

DATA PACKAGE RECORD
BEAN SHEET

DATE: 02/02/95
Page 1 of 1

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DIV : RD	/	/	/	/	NEGOT DATE: / /
BRAN: RSB	/	/	/	/	PROJ DATE: / /
SECT: PCRS	/	/	/	/	
REVR :	/	/	/	/	
CONTR:	/	/	/	/	

* * * DATA REVIEW INSTRUCTIONS * * *

Please review the revised Confidential Statement of Formula
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RED.

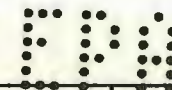
Attn: Anna Skapars

* * * DATA PACKAGE EVALUATION * * *

No evaluation is written for this data package

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL
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United States Environmental Protection Agency
Washington, D. C. 20460

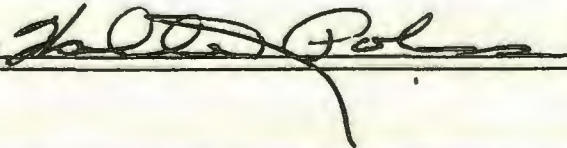
DATA CALL-IN RESPONSE

Form Approved

OMB No. 2070-0107
2070-0057

Approval Expires 03-31-96

INSTRUCTIONS: Please type or print in ink. Please read carefully the attached instructions and supply the information requested on this form.
Use additional sheet(s) if necessary.

1. Company name and Address IONICS, INCORPORATED 3039 WASHINGTON PIKE BRIDGEVILLE PA 15017		2. Case # and Name 4082 Silver, and cmpds.		3. Date and Type of DCI PRODUCT SPECIFIC	
4. EPA Product Registration	5. I wish to cancel this product registration voluntarily.	6. Generic Data		7. Product Specific Data	
		6a. I am claiming a Generic Data Exemption because I obtain the active ingredient from the source EPA registration number listed below.	6b. I agree to satisfy Generic Data requirements as indicated on the attached form entitled "Requirements Status and Registrant's Response."	7a. My product is a MUP and I agree to satisfy the MUP requirements on the attached form entitled "Requirements Status and Registrant's Response."	7b. My product is an EUP and I agree to satisfy the EUP requirements on the attached form entitled "Requirements Status and Registrant's Response."
35900-3		N.A.	N.A.		YES
8. Certification I certify that the statements made on this form and all attachments are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine, imprisonment or both under applicable law. Signature and Title of Company's Authorized Representative 					9. Date NOVEMBER 24, 1993
10. Name of Company Contact WALTER J. POLENS, VICE PRESIDENT					11. Phone Number 412-343-1040

United States Environmental Protection Agency
Washington, D. C. 20460

REQUIREMENTS STATUS AND REGISTRANT'S RESPONSE

Form Approved

OMB No. 2070-0107
2070-0057

Approval Expires 03-31-96

INSTRUCTIONS: Please type or print in ink. Please read carefully the attached instructions and supply the information requested on this form. Use additional sheet(s) if necessary.

1. Company name and Address

IONICS, INCORPORATED
3039 WASHINGTON PIKE
BRIDGEVILLE PA 15017

2. Case # and Name

4082 Silver, and cmpds.

EPA Reg. No. 35900-3

3. Date and Type of DCI

PRODUCT SPECIFIC
ID# 35900-RD-3187

4. Guideline Requirement Number

5. Study Title

Progress Reports

6. Use Pattern

7. Test Substance

8. Time Frame

9. Registrant Response

1 2 3

Prod Chem - Regular Chemical

61-1

Product Identity & composition(1)

ABCDEFGHIJKLMNO MP/EP

8 mos.

7

61-2(a)

Descrip of starting materials, (1,2)
production & formulation
proc

ABCDEFGHIJKLMNO MP/EP and TGAI

8 mos.

7

61-2(b)

Discussion of formation of (1,3)
impurities

ABCDEFGHIJKLMNO MP/EP and TGAI

8 mos.

7

62-1

Preliminary analysis (1,4)

ABCDEFGHIJKLMNO MP/EP and TGAI

8 mos.

7

62-2

Certification of limits (1,5)

ABCDEFGHIJKLMNO MP/EP

8 mos.

7

62-3

Analytical method (1)

ABCDEFGHIJKLMNO MP/EP

8 mos.

7

63-2

Color

ABCDEFGHIJKLMNO MP/EP and TGAI

8 mos.

7

63-3

Physical state

ABCDEFGHIJKLMNO MP/EP and TGAI

8 mos.

7

63-4

Odor

ABCDEFGHIJKLMNO MP/EP and TGAI

8 mos.

7

63-5

Melting point (6)

ABCDEFGHIJKLMNO TGAI

8 mos.

7

63-6

Boiling point (7)

ABCDEFGHIJKLMNO TGAI

8 mos.

7

63-7

Density

ABCDEFGHIJKLMNO MP/EP and TGAI

8 mos.

7

10. Certification

I certify that the statements made on this form and all attachments are true, accurate, and complete.
I acknowledge that any knowingly false or misleading statement may be punishable by fine, imprisonment or both under applicable law.

Signature and Title of Company's Authorized Representative

Walter J. Polens

11. Date

NOVEMBER 24, 1993

12. Name of Company Contact

WALTER J. POLENS, VICE PRESIDENT

13. Phone Number

412-343-1040

J. H. G.

United States Environmental Protection Agency
Washington, D. C. 20460

REQUIREMENTS STATUS AND REGISTRANT'S RESPONSE

Form Approved
OMB No. 2070-0107
2070-0057
Approval Expires 03-31-96

INSTRUCTIONS: Please type or print in ink. Please read carefully the attached instructions and supply the information requested on this form.
Use additional sheet(s) if necessary.

1. Company name and Address IONICS, INCORPORATED 3039 WASHINGTON PIKE BRIDGEVILLE PA 15017	2. Case # and Name 4082 Silver, and cmpds. EPA Reg. No. 35900-3	3. Date and Type of DCI PRODUCT SPECIFIC ID# 35900-RD-3187
---	---	--

4. Guideline Requirement Number	5. Study Title	Progress Reports			6. Use Pattern	7. Test Substance	8. Time Frame	9. Registrant Response
		1	2	3				
63-8	Solubility				ABCDEFGHIJKLMNO	TGAI/PAI	8 mos.	7
63-9	Vapor pressure				ABCDEFGHIJKLMNO	TGAI/PAI	8 mos.	7
63-10	Dissociation constant				ABCDEFGHIJKLMNO	TGAI/PAI	8 mos.	7
63-11	Octanol/water partition coefficient (8)				ABCDEFGHIJKLMNO	PAI	8 mos.	7
63-12	pH (9)				ABCDEFGHIJKLMNO	MP/EP and TGAI	8 mos.	7
63-13	Stability				ABCDEFGHIJKLMNO	MP/EP	8 mos.	7
63-14	Oxidizing or reducing action (10)				ABCDEFGHIJKLMNO	MP/EP	8 mos.	7
63-15	Flammability (11)				ABCDEFGHIJKLMNO	MP/EP	8 mos.	7
63-16	Explodability (12)				ABCDEFGHIJKLMNO	MP/EP	8 mos.	7
63-17	Storage stability				ABCDEFGHIJKLMNO	MP/EP	8 mos.	7
63-18	Viscosity (13)				ABCDEFGHIJKLMNO	MP/EP	8 mos.	7
63-19	Miscibility (14)				ABCDEFGHIJKLMNO	MP/EP	8 mos.	7
63-20	Corrosion characteristics				ABCDEFGHIJKLMNO	MP/EP	8 mos.	7
63-21	Dielectric breakdown voltage (15)				ABCDEFGHIJKLMNO	MP/EP	8 mos.	7
<u>Acute Toxic - Regular Chemical</u>								
81-1	Acute oral toxicity-rat (1,36,37)				ABCDEFGHIJKLMNO	MP/EP and TGAI	8 mos.	7
81-2	Acute dermal toxicity-rabbit/rat (1,2,37)				ABCDEFGHIJKLMNO	MP/EP and TGAI	8 mos.	7
81-3	Acute inhalation toxicity-rat (3)				ABCDEFGHIJKLMNO	MP/EP and TGAI	8 mos.	7

Initial to indicate certification as to information on this page (full text of certification is on page one).

Handwritten signature

Date
NOVEMBER 24, 1993

Handwritten initials

Page 3 of 3

**United States Environmental Protection Agency
Washington, D. C. 20460**

REQUIREMENTS STATUS AND REGISTRANT'S RESPONSE

Form Approved

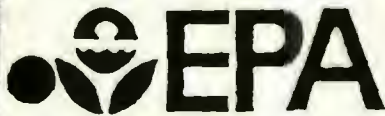
OMB No. 2070-0107

2070-0057

Approved Expires 03-31-96

INSTRUCTIONS: Please type or print in ink. Please read carefully the attached instructions and supply the information requested on this form. Use additional sheet(s) if necessary.

1. Company name and Address IONICS, INCORPORATED 3039 WASHINGTON PIKE BRIDGEVILLE PA 15017				2. Case # and Name 4082 Silver, and cmpds. EPA Reg. No. 35900-3				3. Date and Type of DCI PRODUCT SPECIFIC ID# 35900-RD-3187			
4. Guideline Requirement Number	5. Study Title	6. Use Pattern	7. Test Substance	8. Time Frame	9. Registrant Response	Progress Reports					
						1	2	3			
81-4	Primary eye irritation-rabbit (2)	ABCDEFGHIJKLMNO	MP/EP	8 mos.	7						
81-5	Primary dermal irritation (1,2)	ABCDEFGHIJKLMNO	MP/EP	8 mos.	7						
81-6	Dermal sensitization (4)	ABCDEFGHIJKLMNO	MP/EP	8 mos.	7						
Initial to indicate certification as to information on this page (full text of certification is on page one).						Date NOVEMBER 24, 1993					



United States Environmental Protection Agency
Washington, DC 20460

**CERTIFICATION WITH RESPECT TO
DATA COMPENSATION REQUIREMENTS**

Form Approved

OMB No. 2070-0106

Approval Expires 12-31-92

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St., S.W., Washington, DC 20460; and to the Office of Management and Budget, Paperwork Reduction Project (2070-0106), Washington, DC 20503.

Please fill in blanks below.

Company Name IONICS, INCORPORATED 3039 WASHINGTON PIKE BRIDGEVILLE, PA 15017	Company Number 35900 PA 01
Chemical Name SILVER	EPA Chemical Number 072501

Certify that:

- For each study cited in support of registration or reregistration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) that is an exclusive use study, I am the original data submitter, or I have obtained the written permission of the original data submitter to cite that study.
- That for each study cited in support of registration or reregistration under FIFRA that is NOT an exclusive use study, I am the original data submitter, or I have obtained the written permission of the original data submitter, or I have notified in writing the company(ies) that submitted data I have cited and have offered to: (a) Pay compensation for those data in accordance with sections 3(c)(1)(D) and 3(c)(2)(D) of FIFRA; and (b) Commence negotiation to determine which data are subject to the compensation requirement of FIFRA and the amount of compensation due, if any. The companies I have notified are: (check one)
☒ All companies on the data submitters' list for the active ingredient listed on this form (Cite-All Method or Cite-All Option under the Selective Method). (Also sign the General Offer to Pay below.)
☐ The companies who have submitted the studies listed on the back of this form or attached sheets, or indicated on the attached "Requirements Status and Registrants' Response Form,"
- That I have previously complied with section 3(c)(1)(D) of FIFRA for the studies I have cited in support of registration or reregistration under FIFRA.

Signature 	Date APRIL 11, 1994
Name and Title (Please Type or Print) WALTER J. POLENS, VICE PRESIDENT	

GENERAL OFFER TO PAY: I hereby offer and agree to pay compensation to other persons, with regard to the registration or reregistration of my products, to the extent required by FIFRA sections 3(c)(1)(D) and 3(c)(2)(D).

Signature 	Date APRIL 11, 1994
Name and Title (Please Type or Print) WALTER J. POLENS, VICE PRESIDENT	



IONICS
IONICS, INCORPORATED

P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE 412-343-1040 FAX 412-257-1270

EPA REREGISTRATION

PHASE 5 RESPONSE. SILVER AND COMPOUNDS
CASE NO. 4082, CHEMICAL NO. 072501

EPA REG. NO. 35900-3 (END USE PRODUCT)

GENERAL IONICS MODEL IQ 0820 B BACTERIOSTATIC CONDITIONER WITH HYGENE

ENCLOSED

- (1) OUR COMPLETED APPLICATION FOR REGISTRATION EPA FORM 8570-1
- (2) COMPLETED CONFIDENTIAL STATEMENT OF FORMULA EPA FORM 8570-4
- (3) COMPLETED CERTIFICATION WITH RESPECT TO DATA COMPENSATION REQUIREMENTS EPA FORM 8570-31
- (4) FIVE (5) COPIES OF OUR REVISED DRAFT LABEL AND LABELING
- (5) PRODUCT QUALITY CONTROL PROCEDURE USED TO DETERMINE THE PERCENTAGE OF THE ACTIVE INGREDIENT SILVER. LABEL CLAIM PERCENTAGE IN THIS PRODUCT IS A NOMINAL CONCENTRATION AS REQUIRED BY THE AGENCY.

111



IONICS
IONICS, INCORPORATED

P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE 412-343-1040 FAX 412-257-1270

Subject: General Ionics Model IQ 0820 B
Bacteriostatic Water Conditioner
EPA Registration No. 35900-3

In addition to labeling changes for Reregistration, we are also including in this submission revision changes in the Homeowner's Manual and product label in accordance with your letter of September 24, 1993 as follows:


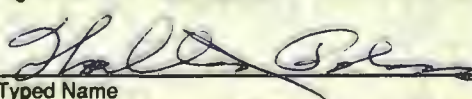
- (1) On the product label, the statement "Keep Out of Reach of Children" is located directly above the signal word "Caution".
- (2) The product label ingredient statement was changed to read as follows:

Active Ingredient: Silver as Metallic	0.07%
Inert Ingredient:	99.93%
Total	100%

- (3) The product label Container Disposal Statement was changed to read "Remove HYgene media from top of filter bed, wrap in paper, and discard in trash".
- (4) The subheading "Directions For Use" was placed on the top of pages 6 and 8 of the Homeowner's Manual.
- (5) The misuse statement was placed directly below the subheading "Directions For Use" as follows:

"It is a violation of Federal Law to use this product in a manner inconsistent with its labeling".
- (6) Concerning an indicator for the useful life of the product's bacteriostatic feature, on page 5 of the Homeowner's Manual we have devised a table which is titled: "Life Expectancy of HYgene Bacteriostatic Media".
- (7) The last section on page 4 of the Homeowner's Manual has been revised to read:

"It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Only use EPA Registered HYgene silver impregnated carbon replacement media in this unit. Use of any media material other than HYgene silver carbon manufactured by Ionics, Incorporated is a violation of the product's labeling instructions, causes improper operation of the unit, and voids the manufacturer's warranty. For your protection, do not accept a replacement media unless it is factory-sealed with both the tape and label reading "HYgene" manufactured by Ionics, Incorporated.

(A) 	United States Environmental Protection Agency Office of Pesticide Programs (H7505C) Washington, DC 20460		<div><input type="checkbox"/> Registration <input type="checkbox"/> Amendment <input checked="" type="checkbox"/> Other</div>		OPP Identifier Number 203035
	Application for Pesticide:				
Section I					
1. Company/Product Number 35900 PA 01/35900-3		2. EPA Product Manager JOHN H. LEE		3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted	
4. Company/Product (Name) GENERAL IONICS MODEL IQ0820B BACTERIOSTATIC WATER CONDITIONER WITH HYGENE		PM# 31			
5. Name and Address of Applicant (Include ZIP Code) IONICS, INCORPORATED 3039 WASHINGTON PIKE P.O. BOX 99 BRIDGEVILLE, PA 15017 <input type="checkbox"/> Check if this is a new address		6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____			
Section II					
<input type="checkbox"/> Amendment - Explain below		<input type="checkbox"/> Final printed labels in response to Agency letter dated _____			
<input type="checkbox"/> Resubmission in response to Agency letter dated _____		<input type="checkbox"/> "Me Too" Application.			
<input type="checkbox"/> Notification - Explain below.		<input checked="" type="checkbox"/> Other - explain below. APPLICATION FOR REREGISTRATION			
Explanation: Use additional page(s) if necessary. (For section I and Section II.) EXPEDITED AMENDMENT IN RESPONSE TO THE REREGISTRATION ELIGIBILITY DOCUMENT FOR CASE NO. 4082, SILVER AND COMPOUNDS.					
Section III					
1. Material This Product Will Be Packaged In:					
Child-Resistant Packaging <input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No		Unit Packaging <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
* Certification must be submitted.		If "Yes," Unit Package wgt. 115 LBS.		No. per container 1	
If "Yes," Unit Package wgt. 115 LBS.		No. per container 1		If "Yes," Package wgt. No. per container	
2. Type of Container <input checked="" type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input checked="" type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____					
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) of Retail Container 13 1/2" X 16 1/2" X 54"		5. Location of Label Directions <input type="checkbox"/> On Label <input checked="" type="checkbox"/> On Labeling accompanying product	
6. Manner In Which Label Is Affixed To Product <input checked="" type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled		<input type="checkbox"/> Other _____			
Section IV					
1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)					
Name WALTER J. POLENS JOHN D. COLLINS		Title VICE PRESIDENT MANAGER, LABORATORY		Telephone No. (Include Area Code) (412) 343-1040	
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.					6. Date Application Received (Stamped)
2. Signature 		3. Title VICE PRESIDENT			
4. Typed Name WALTER J. POLENS		5. Date APRIL 11, 1994			

PAPERWORK REDUCTION ACT NOTICE and INSTRUCTIONS

PAPERWORK REDUCTION ACT NOTICE: Public reporting burden for this collection of information is estimated to average 0.85 hour per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

INSTRUCTIONS: This form is to be used for all applications for new registration, and use reregistration, amendment, resubmission, to applications for notifications, final printed labeling, reregistration, etc. In order to process an application for a new registration submitted on this form, the following material must accompany the application:

1. Certification with Respect to Citation of Data (EPA Form 8570-29). [If not exempted by 40 CFR 152.81 (b) (4)];
2. Confidential Statement of Formula (EPA Form 8570-4);
3. Formulator's Exemption Statement (EPA Form 8570-27);
4. Five copies of draft labeling;
5. Three copies of any data submitted;
6. Authorization letter where applicable;
7. Matrices where applicable.

Submission of Labeling - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8.5 x 11 inch paper or a mockup of the proposed label. If prepared as a mockup, it should be constructed in such a way as to facilitate storage in an 8.5 x 11 inch file. Mockup labels significantly smaller than 8.5 x 11 inches should be mounted on 8.5 x 11 inch paper for submission.

Submission of Data - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

SPECIFIC INSTRUCTIONS: Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Sections I, III, and IV must be completed by the applicant. For applications submitted in connection with amended registration actions, resubmissions, notifications, reregistrations, etc., Sections I, II, and IV must be completed by the applicant.

Block A - Check the appropriate action for which you are submitting this form.

SECTION I - This section must be completed, as applicable, for all registration actions.

1. **Company/Product Number** - Insert your Company Number, if one has been assigned by EPA. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If your product is registered, insert the Product Number.
2. **EPA Product Manager** - If known, fill in the name and PM number of the EPA Product Manager.
3. **Proposed Classification** - Specify the proposed classification of this product.
4. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom the registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters. An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.
6. **Expedited Review** - FIFRA section 3 (c) 3 (B) provides for expedited review of applications for registration, or amendments to existing registrations, that are similar or identical to other pesticide products that are currently registered with the EPA. In order for your application to be eligible for expedited review, you must provide us with the EPA Registration Number and product name of the product you believe is similar to or identical to your product. The product must be similar or identical in both formulation and labeled uses.

SECTION II - This section must be completed for all applications submitted to amend the registration only of a currently registered product (Amendment), for a resubmission in response to an Agency letter, for notifications to the Agency, for the submission of final printed labeling, for reregistration and for any other action that pertains to a specific EPA-registered product. This section is not to be used for a new application for registration.

1. **Subject of submission** - Check the applicable block and provide the Agency letter date if appropriate. Provide a brief explanation of the purpose(s) for the submission, such as "the addition of a site, pest or crop (specify)"; "amend the Confidential Statement of Formula by..."; "reregistration submission"; general label revision of use directions." Attach a separate page if additional space is needed.

SECTION III (Packaging and Container Information) - This Section must be completed for all applications submitted in connection with new registration or applicable amendments.

1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Specify the net contents of all retail containers for your product.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Method by which label is affixed to product** - Indicate the method product label is attached to retail container.

SECTION IV (Contact Point) - This Section must be completed for all applications for Registration actions, i.e., new products registration, resubmission, "me-too," reregistration, etc.

- 1-5. Self-explanatory.
6. **EPA Use Only.**



United States Environmental Protection Agency
Washington, DC 20460

**CERTIFICATION WITH RESPECT TO
DATA COMPENSATION REQUIREMENTS**

Form Approved

OMB No. 2070-0106

Approval Expires 12-31-92

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St., S.W., Washington, DC 20460; and to the Office of Management and Budget, Paperwork Reduction Project (2070-0106), Washington, DC 20503.

Please fill in blanks below.

Company Name IONICS, INCORPORATED 3039 WASHINGTON PIKE BRIDGEVILLE, PA 15017	Company Number 35900 PA 01
Chemical Name SILVER	EPA Chemical Number 072501

Verify that:

1. For each study cited in support of registration or reregistration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) that is an exclusive use study, I am the original data submitter, or I have obtained the written permission of the original data submitter to cite that study.
2. That for each study cited in support of registration or reregistration under FIFRA that is NOT an exclusive use study, I am the original data submitter, or I have obtained the written permission of the original data submitter, or I have notified in writing the company(ies) that submitted data I have cited and have offered to: (a) Pay compensation for those data in accordance with sections 3(c)(1)(D) and 3(c)(2)(D) of FIFRA; and (b) Commence negotiation to determine which data are subject to the compensation requirement of FIFRA and the amount of compensation due, if any. The companies I have notified are: (check one)

☒ All companies on the data submitters' list for the active ingredient listed on this form (Cite-All Method or Cite-All Option under the Selective Method). (Also sign the General Offer to Pay below.)

☐ The companies who have submitted the studies listed on the back of this form or attached sheets, or indicated on the attached "Requirements Status and Registrants' Response Form."

3. That I have previously complied with section 3(c)(1)(D) of FIFRA for the studies I have cited in support of registration or reregistration under FIFRA.

Signature 	Date APRIL 11, 1994
Name and Title (Please Type or Print) WALTER J. POLENS, VICE PRESIDENT	

GENERAL OFFER TO PAY: I hereby offer and agree to pay compensation to other persons, with regard to the registration or reregistration of my products, to the extent required by FIFRA sections 3(c)(1)(D) and 3(c)(2)(D).

Signature 	Date APRIL 11, 1994
Name and Title (Please Type or Print) WALTER J. POLENS, VICE PRESIDENT	



IONICS
IONICS, INCORPORATED

P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE 412-343-1040 FAX 412-257-1270

EPA REREGISTRATION

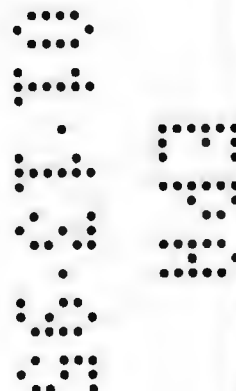
PHASE 5 RESPONSE. SILVER AND COMPOUNDS
CASE NO. 4082, CHEMICAL NO. 072501

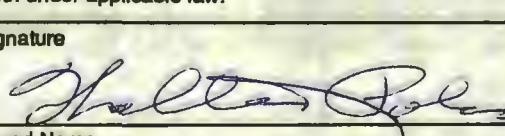
EPA REG. NO. 35900-3 (END USE PRODUCT)

HYGENE REPLACEMENT MEDIA GENERAL IONICS BACTERIOSTATIC WATER CONDITIONER

ENCLOSED

- (1) OUR COMPLETED APPLICATION FOR REGISTRATION EPA FORM 8570-1
- (2) COMPLETED CONFIDENTIAL STATEMENT OF FORMULA EPA FORM 8570-4
- (3) COMPLETED CERTIFICATION WITH RESPECT TO DATA COMPENSATION REQUIREMENTS EPA FORM 8570-31
- (4) FIVE (5) COPIES OF OUR REVISED DRAFT LABEL AND LABELING
- (5) PRODUCT QUALITY CONTROL PROCEDURE USED TO DETERMINE THE PERCENTAGE OF THE ACTIVE INGREDIENT SILVER. LABEL CLAIM PERCENTAGE IN THIS PRODUCT IS A NOMINAL CONCENTRATION AS REQUIRED BY THE AGENCY.



(A) EPA United States Environmental Protection Agency Office of Pesticide Programs (H7505C) Washington, DC 20460 Application for Pesticide:		<input type="checkbox"/> Registration <input type="checkbox"/> Amendment <input checked="" type="checkbox"/> Other	OPP Identifier Number <h1 style="margin: 0;">203036</h1>
Section I			
1. Company/Product Number 35900 PA 01/35900-3		2. EPA Product Manager JOHN H. LEE	
4. Company/Product (Name) HYGENE REPLACEMENT MEDIA FOR GENERAL IONICS CONDITIONER		PM# 31	
5. Name and Address of Applicant (Include ZIP Code) IONICS, INCORPORATED 3039 WASHINGTON PIKE P.O. BOX 99 BRIDGEVILLE, PA 15017 <input type="checkbox"/> Check if this is a new address		3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted	
		6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	
Section II			
<input type="checkbox"/> Amendment - Explain below <input type="checkbox"/> Resubmission in response to Agency letter dated _____ <input type="checkbox"/> Notification - Explain below.		<input type="checkbox"/> Final printed labels in response to Agency letter dated _____ <input type="checkbox"/> "Me Too" Application. <input checked="" type="checkbox"/> Other - explain below.	
		APPLICATION FOR REREISTRATION	
Explanation: Use additional page(s) if necessary. (For section I and Section II.) EXPEDITED AMENDMENT IN RESPONSE TO THE REREISTRATION ELIGIBILITY DOCUMENT FOR CASE NO. 4082, SILVER AND COMPOUNDS.			
Section III			
1. Material This Product Will Be Packaged In:			
Child-Resistant Packaging <input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No	Unit Packaging <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If "Yes," Unit Package wgt. 2 LBS.	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes," Package wgt.	2. Type of Container <input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input checked="" type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
* Certification must be submitted.		No. per container 1	No. per container
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) of Retail Container 7" DIA. X 5" H	
5. Location of Label Directions <input type="checkbox"/> On Label <input checked="" type="checkbox"/> On Labeling accompanying product		6. Manner In Which Label Is Affixed To Product <input type="checkbox"/> Lithograph <input checked="" type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled <input type="checkbox"/> Other _____	
Section IV			
1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)			
Name WALTER J. POLENS JOHN D. COLLINS		Title VICE PRESIDENT MANAGER, LABORATORY	
		Telephone No. (Include Area Code) (412) 343-1040	
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.			6. Date Application Received (Stamped)
2. Signature 		3. Title VICE PRESIDENT	
4. Typed Name WALTER J. POLENS		5. Date APRIL 11, 1994	

PAPERWORK REDUCTION ACT NOTICE and INSTRUCTIONS

PAPERWORK REDUCTION ACT NOTICE: Public reporting burden for this collection of information is estimated to average 0.85 hour per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

INSTRUCTIONS: This form is to be used for all applications for new registration, and use reregistration, amendment, resubmission, to applications for notifications, final printed labeling, reregistration, etc. In order to process an application for a new registration submitted on this form, the following material must accompany the application:

1. Certification with Respect to Citation of Data (EPA Form 8570-29). (If not exempted by 40 CFR 152.81 (b) (4));
2. Confidential Statement of Formula (EPA Form 8570-4);
3. Formulator's Exemption Statement (EPA Form 8570-27);
4. Five copies of draft labeling;
5. Three copies of any data submitted;
6. Authorization letter where applicable;
7. Matrices where applicable.

Submission of Labeling - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8.5 x 11 inch paper or a mockup of the proposed label. If prepared as a mockup, it should be constructed in such a way as to facilitate storage in an 8.5 x 11 inch file. Mockup labels significantly smaller than 8.5 x 11 inches should be mounted on 8.5 x 11 inch paper for submission.

Submission of Data - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

SPECIFIC INSTRUCTIONS: Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Sections I, III, and IV must be completed by the applicant. For applications submitted in connection with amended registration actions, resubmissions, notifications, reregistrations, etc., Sections I, II, and IV must be completed by the applicant.

Block A - Check the appropriate action for which you are submitting this form.

SECTION I - This section must be completed, as applicable, for all registration actions.

1. **Company/Product Number** - Insert your Company Number, if one has been assigned by EPA. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If your product is registered, insert the Product Number.
2. **EPA Product Manager** - If known, fill in the name and PM number of the EPA Product Manager.
3. **Proposed Classification** - Specify the proposed classification of this product.
4. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom the registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters. An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.
6. **Expedited Review** - FIFRA section 3 (c) 3 (B) provides for expedited review of applications for registration, or amendments to existing registrations, that are similar or identical to other pesticide products that are currently registered with the EPA. In order for your application to be eligible for expedited review, you must provide us with the EPA Registration Number and product name of the product you believe is similar to or identical to your product. The product must be similar or identical in both formulation and labeled uses.

SECTION II - This section must be completed for all applications submitted to amend the registration only of a currently registered product (Amendment), for a resubmission in response to an Agency letter, for notifications to the Agency, for the submission of final printed labeling, for reregistration and for any other action that pertains to a specific EPA-registered product. This section is not to be used for a new application for registration.

1. **Subject of submission** - Check the applicable block and provide the Agency letter date if appropriate. Provide a brief explanation of the purpose(s) for the submission, such as "the addition of a site, pest or crop (specify)"; "amend the Confidential Statement of Formula by..."; "reregistration submission"; general label revision of use directions." Attach a separate page if additional space is needed.

SECTION III (Packaging and Container Information) - This Section must be completed for all applications submitted in connection with new registration or applicable amendments.

1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Specify the net contents of all retail containers for your product.
4. **Size of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Method, if which label is affixed to product** - Indicate the method product label is attached to retail container.

SECTION IV (Contact Point) - This Section must be completed for all applications for Registration actions, i.e., new products registration, resubmission, "me-too," reregistration, etc.

- 1-5. **Self-explanatory.**
6. **EPA Use Only.**

ATTACHED NOTIFICATION

TO: PM Elk Horn
FROM: 31 REG. SUPPORT BR.

match-31

EPA REG. NO. 35900-3

COMPANY NAME _____

NO NEW LABEL ☒

NEW LABEL ATTACHED _____

NEW CSF ATTACHED _____

.....

☒ THIS IS AN ADDITIONAL BRAND NAME

_____ THIS IS A CSF PERMITTED UNDER PR NOTICE 88-6

_____ THIS IS A LABEL CHANGE PERMITTED UNDER PR NOTICE 88-6

.....

☒ THIS WAS SENT TO SIG FOR CODING AND/OR MICROFICHING

_____ FILE IN JACKET

(A) United States Environmental Protection Agency Office of Pesticide Programs (H7505C) Washington, DC 20460 Application for Pesticide:	<input type="checkbox"/> Registration <input type="checkbox"/> Amendment <input type="checkbox"/> Other	OPP Identifier Number <div style="font-size: 24pt; color: red; text-align: center;">165873</div>
---	--	---

Section I

1. Company/Product Number 35900-3	2. EPA Product Manager JOHN H. LEE	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) GENERAL IONICS MODEL IQ 0820 B BACTERIOSTATIC WATER CONDITIONER	PM# PM-31	
5. Name and Address of Applicant (Include ZIP Code) IONICS, INCORPORATED P.O. BOX 99 3039 WASHINGTON PIKE BRIDGEVILLE, PA 15017 <input type="checkbox"/> Check if this is a new address		6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(I), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____

Section II

<input type="checkbox"/> Amendment - Explain below <input type="checkbox"/> Resubmission in response to Agency letter dated _____ <input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____ <input type="checkbox"/> "Me Too" Application. <input type="checkbox"/> Other - explain below.
---	---

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

ADDITIONAL BRAND NAME REQUEST

GENERAL IONICS MODEL IQ 0820 B BACTERIOSTATIC WATER
 CONDITIONER WITH HYGENE

Section III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No If "Yes," Unit Package wgt. No. per container	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No If "Yes," Package wgt. No. per container	<input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____		
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) of Retail Container		5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner In Which Label Is Affixed To Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Other (_____) <input type="checkbox"/> Stenciled					

* Certification must be submitted.

Section IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name WALTER J. POLENS	Title VICE PRESIDENT	Telephone No. (Include Area Code) (412) 343-1040
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature 	3. Title VICE PRESIDENT	
4. Typed Name WALTER J. POLENS	5. Date DECEMBER 2, 1992	

Paperwork Reduction Act Notice and Instructions

Paperwork Reduction Act Notice

Public reporting burden for this collection of information is estimated to average of 0.85 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

Instructions

General

This form is to be used for all applications for new and amended registrations for pesticide products.

In order to process an application for new registration submitted on this form, the following material must accompany the application:

1. Offer to Pay Statement (EPA Form 8570-22, -23, or -24). (If not exempted by 40 CFR 162.9-1(b).)
2. Confidential Statement of Formula (EPA Form 8570-4).
3. Five copies of draft labeling.
4. Three copies of any data submitted.

Submission of Labeling - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8 1/2 x 11 inch paper or as a mockup of the proposed label. If prepared as a mockup it should be constructed in such a way as to facilitate storage in an 8 1/2 x 11 inch file. Mockup labels significantly smaller than 8 1/2 x 11 inches should be mounted on 8 1/2 x 11 inch paper for submission.

Submission of Data - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

Specific

Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Section I, III, and IV must be completed by the applicant. For applications submitted in connection with amended registration actions, Section I, II, and IV must be completed by the applicant.

Block A - Check the appropriate action for which you are submitting this form.

Section I - This Section must be completed for both Registration and Amended Registration actions.

1. **Company/Product Number** - Insert your company number, if one has been assigned. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If application is for an amendment, insert the registration number of the product.
2. **Date** - Fill in the appropriate date.
3. **Product Manager** - If known, fill in the name and number of the Product Manager.
4. **Proposed Classification** - Specify the proposed classification for this product.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters.

An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.

6. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.

Amendment Information

Section II - This Section must be completed for all applications submitted in connection with Amended Registration.

1. **Subject of Amendment** - Check the appropriate block, and provide a brief explanation of the purpose(s) for the amendment, such as: "the addition of a site, pest, or crop"; "to change inert ingredient"; "general label revisions of precautionary statements," etc.

Packaging and Container Information

Section III - This Section must be completed for all applications submitted in connection with New Registration.

1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Specify the net contents of all retail containers for your product.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicate the method product labeling is attached to retail container.

Contact Point

Section IV - This Section must be completed for all Registration and Amended Registration applications.

- 1-5. Self-explanatory.
6. EPA Use Only.

MEMORANDUM
OF CALL

Previous editions usable

TO:

☐ YOU WERE CALLED BY- ☐ YOU WERE VISITED BY-

OF (Organization)

☐ PLEASE PHONE ☐ FTS ☐ AUTOVON

☐ WILL CALL AGAIN ☐ IS WAITING TO SEE YOU

☐ RETURNED YOUR CALL ☐ WISHES AN APPOINTMENT

MESSAGE

*Notification for
Owen Beeter*

RECEIVED BY	DATE	TIME

62-110 NSN 7540-00-534-4018
★ U.S.G.P.O. 1992 312-070-40024

STANDARD FORM 63 (Rev. 8-81)
Prescribed by GSA
FPMR (41 CFR) 101-11.6

12/18/92

Reference Files System

Product Data Report

Identification Number: 35900-2

Case Barcode: 019229

Product Name: HYGENE

Case Type: R Federal Registration

Company: 35900 IONICS, INCORPORATED

Product Manager: 31 John H. Lee

Product Status: A Active

Formulation Code: 10 Impregnated Materials

Toxicity Category: 3 Caution

Cancel/Transfer Reason:

RCRA Classification: Not Available

Label Date: 75/10

Registration Date: 10/29/75

Cancellation Date: / /

Stocks Date: / /

Transferred: No

Suspended: No

Use Categories

Terrestrial Food Crop:	No
Terrestrial Feed Crop:	No
Terrestrial Non-Food Crop:	No
Aquatic Food Crop:	No
Aquatic Non-Food Outdoor:	No
Aquatic Non-Food Residential:	No
Aquatic Non-Food Industrial:	No
Greenhouse Food Crop:	No
Greenhouse Non-Food Crop:	No
Forestry:	No
Residential Outdoor:	No
Indoor Food:	Yes
Indoor Non-Food:	No
Indoor Residential:	No
Indoor Medical:	No

Pest Categories

Non-Pest:	No
Disinfectant:	Yes
Fungal:	No
Invertebrate:	No
Nematodal:	No
Plant:	No
Vertebrate:	No

Miscellaneous Flags

Restricted Use:	No
Conditional Use:	No
Reregistration:	No
Child Resistant Packaging:	No
Special Review:	No

*Owen,
Re. Hygene
We cannot do a thing
about the attached notification.
This company has a line of
products with the word "Hygene"
inserted one way or the other.
J. Lee, 8/11-31*

12/18/92

Reference Files System

Product Data Report

Identification Number: 35900-3

Case Barcode: 012963

Product Name: GENERAL IONICS MODEL IQ0820B BACTERIOSTATIC WATER
CONDITIONER

Case Type: R Federal Registration

Company: 35900 IONICS, INCORPORATED

Product Manager: 31 John H. Lee

Product Status: A Active

Formulation Code: 10 Impregnated Materials
Toxicity Category: 3 Caution

Cancel/Transfer Reason:

RCRA Classification: Not Available

Label Date: 83/12

Registration Date: 03/13/78

Cancellation Date: / /

Stocks Date: / /

Transferred: No

Suspended: No

Use Categories

Terrestrial Food Crop: No
Terrestrial Feed Crop: No
Terrestrial Non-Food Crop: No
Aquatic Food Crop: No
Aquatic Non-Food Outdoor: No
Aquatic Non-Food Residential: No
Aquatic Non-Food Industrial: No
Greenhouse Food Crop: No
Greenhouse Non-Food Crop: No
Forestry: No
Residential Outdoor: No
Indoor Food: Yes
Indoor Non-Food: No
Indoor Residential: No
Indoor Medical: No

Pest Categories

Non-Pest: No
Disinfectant: Yes
Fungal: No
Invertebrate: No
Nematodal: No
Plant: No
Vertebrate: No

Miscellaneous Flags

Restricted Use: No
Conditional Use: No
Reregistration: No
Child Resistant Packaging: No
Special Review: No

Reviewer ID

Submission No. 8470684

Data Package No. _____

CODING FORM FOR APPLICATIONS FOR REGISTRATION/AMENDMENTS

File Symbol/Reg. No. 35900-3 PM 31 Action Code 67410 Descriptor (Amend/Resubmissions only) 8 month response5 Intrastate Call-in ☐ (Y) Yes ☐ (N) No 15 Child-resistant Packaging ☐ (C) Certification ☐ (S) Service Person20 Registration Type: ☒ (1) Conditional ☐ (2) Unconditional ☐ (R) Non-residential Use Only ☐ (N) Not-Applicable25 Proposed Classification: 30 Final Classification:☐ (R) Restricted ☐ (R) Restricted ☐ (G) General ☐ (N) Not Classified35 Date on Application: 04 00 94 04 06 94 40 Date Received by PM: 04 06 94
MO DAY YR MO DAY YR MO DAY YR80 Method of Support:☐ (1) Cite-All ☐ (6) Owner Submission ☐ (4) Not Applicable ☐ (7) Total Submission ☐ (5) Not Submitted ☐ (8) Selective Method

Reviewers Requested:

CH

EF

PL

DEB

NDEB

TB

EEB

EFGB

DATE
SENTDUE
DATEDATE
RETURNEDRESPONSE
CODERESPONSE
DATE115 FINAL Response Code 94
ACTION120 Response 07 14 94
MO DAY YR75-DAY RESPONSE DUE DATE: ☐ (Y) Yes ☐ (N) No

JUL 14 1994

MEMORANDUM

Subject: Request to Issue a Notice of Intent to Suspend (NOITS)
to Registration of Silver Products for Failure to Respond
to the Silver RED 8-month DCI as Required under FIFRA
Section 3 (c) (2) (B).

FROM: Juanita Wills, Chief
Antimicrobial Program Branch
Registration Division (7505C)

TO: Frances Liem, Chief
Laboratory Data Integrity and Compliance Branch
Office of Enforcement and Compliance Assurance
(EN-342W)

The Antimicrobial Program Branch (APB) requests that a 3(c) (2) (B) Notice of Intent to Suspend (NOITS) be issued to those registrants of Silver products who failed to respond to the required 8-month Data Call-In (DCI) Notice in the Reregistration Eligibility Document (RED) for Silver, Case 4082.

The Silver RED required that the registrants of pesticide products containing Silver meet certain data requirements to maintain continued registration of product(s).

The registrants listed below were sent the Silver RED upon issuance August 8, 1993. As of the date of this letter, these registrants have failed to respond to the 8-month DCI. Certified mail receipt cards (green cards) were received from all registrants who were mailed the RED. Submitted as an attachment to this memo are copies of each registrants' green card showing receipt of the Silver RED document on or near August 12, 1993.

The 8-month DCI response required submission of an application for reregistration, a Confidential Statement of Formula (CSF), Certification Form, revised labeling, and submitting or citing, product-specific chemistry and acute toxicity data. Failure to adequately respond to the 8-month DCI for this RED is a basis for the Agency to issue a NOITS.

If you have any further questions regarding this matter,
please contact Karen Leavy at (703)-305-6966.

Attachments

cc: Walter Francis
Marshall Swindell

APB requests that a 3 (c) (2) (B) NOITS letter be issued to each of the registrants listed below for failure to respond to the 8-month DCI for the Silver RED. The registrants' complete name and address and registration number, is provided as follows:

1) Registrant: Pazianqs Association
Agent For: Everpure, Inc.
1338 G Street, SE
Washington, DC 20003

EPA Reg. Nos.: 2623-4 and 2623-5

2) Registrant: Barnebey & Sutcliffe Corporation

EPA Reg. Nos.: 58295-1, 58295-2, and 58295-3

3) Registrant: BesTech, Inc.

EPA Reg. Nos.: 37589-2, 37589-4, 37589-5 and 37589-6

4) Registrant: Ionics, Inc.

EPA Reg. Nos.: 35900-2, 35900-3, 35900-6, 35900-7,
35900-9, 35900-12, 35900-13, 35900-16 and
35900-18

5) Registrant: National Safety Associates

EPA Reg. Nos.: 44751-1, 44751-2, 44751-3, 44751-4,
44751-5, 44751-7, 44751-8, 44751-9,
44751-10, and 44751-11.

8455512
Record Number

Reference Number

Input Date

COODING FORM FOR APPLICATIONS FOR REGISTRATION/AMENDMENTS

File Symbol/Reg. No. 35900-3 PM 31 | 8 | Action Code 670

|10| Descriptor (Amend/Resubmissions only) 90 DAY Response to Silver Red DATA WAIVERS

|5| Intrastate Call-In ☐ (Y) Yes |13| Child-resistant Packaging ☐ (C) Certified
☐ (N) No ☐ (S) Service F

|20| Registration Type:
☐ (1) Conditional ☐ (2) Unconditional
☐ (R) Restricted Use Or ☐ (H) Not-Appl

|23| Proposed Classification: |30| Final Classification:
☐ (R) Restricted ☐ (R) Restricted
☐ (G) General ☐ (N) Not Classified

|33| Date on Application: |44| EPA Received Date: |45| Date Received by F
|1|1| |2|4| |9|3| |1|2| |0|9| |2|3| |1|2| |0|9| |9|3|
MO DAY YR MO DAY YR MO DAY YR

|80| Method of Support:
☐ (1) Cite-All ☐ (6) Owner Submission
☐ (4) Not Applicable ☐ (7) Total Submission
☐ (5) Not Submitted ☐ (8) Selective Method

Reviewers Requested:

RD
PM
PL
CH
EP

DATE SENT	DATE	DATE RETURNED

RESPONSE CODE	RESPONSE DATE

|108| Status:

|113| FINAL Response

77

|128| Response

112 120913

United States Environmental Protection Agency
Washington, D. C. 20460

REQUIREMENTS STATUS AND REGISTRANT'S RESPONSE

Form Approved

OMB No. 2070-0107
2070-0057

Approval Expires 03-31-96

INSTRUCTIONS: Please type or print in ink. Please read carefully the attached instructions and supply the information requested on this form.
Use additional sheet(s) if necessary.

1. Company name and Address

IONICS, INCORPORATED
3039 WASHINGTON PIKE
BRIDGEVILLE PA 15017

2. Case # and Name

4082 Silver, and cmpds.

EPA Reg. No. 35900-3

3. Date and Type of DCI

PRODUCT SPECIFIC
ID# 35900-RD-3187

4. Guideline Requirement Number	5. Study Title	Progress Reports			6. Use Pattern	7. Test Substance	8. Time Frame	9. Registrant Response
		1	2	3				
	<u>Prod Chem - Regular Chemical</u>							
61-1	Product identity & composition(1)				ABCDEFGHIJKLMNO	MP/EP	8 mos.	7
61-2 (a)	Descrip of starting materials, (1,2) production & formulation proc				ABCDEFGHIJKLMNO	MP/EP and TGAI	8 mos.	7
61-2 (b)	Discussion of formation of (1,3) impurities				ABCDEFGHIJKLMNO	MP/EP and TGAI	8 mos.	7
62-1	Preliminary analysis (1,4)				ABCDEFGHIJKLMNO	MP/EP and TGAI	8 mos.	7
62-2	Certification of limits (1,5)				ABCDEFGHIJKLMNO	MP/EP	8 mos.	7
62-3	Analytical method (1)				ABCDEFGHIJKLMNO	MP/EP	8 mos.	7
63-2	Color				ABCDEFGHIJKLMNO	MP/EP and TGAI	8 mos.	7
63-3	Physical state				ABCDEFGHIJKLMNO	MP/EP and TGAI	8 mos.	7
63-4	Odor				ABCDEFGHIJKLMNO	MP/EP and TGAI	8 mos.	7
63-5	Melting point (6)				ABCDEFGHIJKLMNO	TGAI	8 mos.	7
63-6	Boiling point (7)				ABCDEFGHIJKLMNO	TGAI	8 mos.	7
63-7	Density				ABCDEFGHIJKLMNO	MP/EP and TGAI	8 mos.	7

10. Certification

I certify that the statements made on this form and all attachments are true, accurate, and complete.
I acknowledge that any knowingly false or misleading statement may be punishable by fine, imprisonment
or both under applicable law.

Signature and Title of Company's Authorized Representative

Walter J. Polens

11. Date

NOVEMBER 24, 1993

12. Name of Company Contact

WALTER J. POLENS, VICE PRESIDENT

13. Phone Number

412-343-1040

United States Environmental Protection Agency
Washington, D. C. 20460

REQUIREMENTS STATUS AND REGISTRANT'S RESPONSE

Form Approved

OMB No. 2070-0107
2070-0057

Approval Expires 03-31-96

INSTRUCTIONS: Please type or print in ink. Please read carefully the attached instructions and supply the information requested on this form.
Use additional sheet(s) if necessary.

1. Company name and Address

IONICS, INCORPORATED
3039 WASHINGTON PIKE
BRIDGEVILLE PA 15017

2. Case # and Name

4082 Silver, and cmpds.

EPA Reg. No. 35900-3

3. Date and Type of DCI

PRODUCT SPECIFIC
ID# 35900-RD-3187

4. Guideline Requirement Number	5. Study Title	Progress Reports	6. Use Pattern			7. Test Substance	8. Time Frame	9. Registrant Response
			1	2	3			
63-8	Solubility					ABCDEFGH IJKLMNO TGAI/PAI	8 mos.	7
63-9	Vapor pressure					ABCDEFGH IJKLMNO TGAI/PAI	8 mos.	7
63-10	Dissociation constant					ABCDEFGH IJKLMNO TGAI/PAI	8 mos.	7
63-11	Octanol/water partition coefficient (8)					ABCDEFGH IJKLMNO PAI	8 mos.	7
63-12	pH (9)					ABCDEFGH IJKLMNO MP/EP and TGAI	8 mos.	7
63-13	Stability					ABCDEFGH IJKLMNO MP/EP	8 mos.	7
63-14	Oxidizing or reducing action (10)					ABCDEFGH IJKLMNO MP/EP	8 mos.	7
63-15	Flammability (11)					ABCDEFGH IJKLMNO MP/EP	8 mos.	7
63-16	Explodeability (12)					ABCDEFGH IJKLMNO MP/EP	8 mos.	7
63-17	Storage stability					ABCDEFGH IJKLMNO MP/EP	8 mos.	7
63-18	Viscosity (13)					ABCDEFGH IJKLMNO MP/EP	8 mos.	7
63-19	Miscibility (14)					ABCDEFGH IJKLMNO MP/EP	8 mos.	7
63-20	Corrosion characteristics					ABCDEFGH IJKLMNO MP/EP	8 mos.	7
63-21	Dielectric breakdown voltage (15)					ABCDEFGH IJKLMNO MP/EP	8 mos.	7
Acute Toxic - Regular Chemical								
81-1	Acute oral toxicity-rat (1,36,37)					ABCDEFGH IJKLMNO MP/EP and TGAI	8 mos.	7
81-2	Acute dermal toxicity-rabbit/rat (1,2,37)					ABCDEFGH IJKLMNO MP/EP and TGAI	8 mos.	7
81-3	Acute inhalation toxicity-rat (3)					ABCDEFGH IJKLMNO MP/EP and TGAI	8 mos.	7

Initial to indicate certification as to information on this page
(full text of certification is on page one).

Date

NOVEMBER 24, 1993

**United States Environmental Protection Agency
Washington, D. C. 20460**

Form Approved

OMB No. 2070-0107
2070-0057

Approval Expires 03-31-96

REQUIREMENTS STATUS AND REGISTRANT'S RESPONSE

INSTRUCTIONS: Please type or print in ink. Please read carefully the attached instructions and supply the information requested on this form. Use additional sheet(s) if necessary.

1. Company name and Address IONICS, INCORPORATED 3039 WASHINGTON PIKE BRIDGEVILLE PA 15017	2. Case # and Name 4082 Silver, and cmpds. EPA Reg. No. 35900-3	3. Date and Type of DCI PRODUCT SPECIFIC ID# 35900-RD-3187
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[illegible]

Initial to indicate certification as to information on this page
(full text of certification is on page one).

Date _____

NOVEMBER 24, 1993

5448705

Record Number

Reference Number

Input Date

CODING FORM FOR APPLICATIONS FOR REGISTRATION/AMENDMENTS

File Symbol/Reg. No. 35900-3 PM 31 | 8 | Action Code 320

10 | Descriptor (Amend/Resubmissions only) _____

5 | Intrastate Call-In ☐ (Y) Yes ☐ (N) No

13 | Child-resistant Packaging ☐

☐ (C) Certificate

☐ (S) Service F

☐ (R) Non-resid Use Or

☐ (H) Not-Appli

20 | Registration Type:

☐ (1) Conditional

☐ (2) Unconditional

25 | Proposed Classification: 30 | Final Classification:

☐ (R) Restricted

☐ (R) Restricted

☐ (G) General

☐ (N) Not Classified

35 | Date on Application:

04 | EPA Received Date:

40 | Date Received by P

01 | 6 | 15 | 9 | 3 |
MO DAY YR

01 | 6 | 2 | 2 | 9 | 3 |
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01 | 6 | 2 | 12 | 9 | 3 |
MO DAY YR

80 | Method of Support:

☐ (1) Cite-All

☐ (6) Owner Submission

☐ (4) Not Applicable

☐ (7) Total Submission

☐ (5) Not Submitted

☐ (8) Selective Method

Reviewers Requested:

RD

PM

PL

CH

EP

DATE SENT

DUE DATE

DATE RETURNED

RESPONSE CODE

RESPONSE DATE

108 | Status: _____

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

SEP 24 1993

Ionics, Inc.
P. O. Box 99
Bridgeville, Pennsylvania 15017

Attention: John D. Collins

Gentlemen:

Subject: General Ionics Model IQ 0820 B Bacteriostatic Water
Conditioner
EPA Registration Number 35900-3
Your Submission Dated June 15, 1993
EPA Received Date June 22, 1993

The amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, to revise the Homeowner's Manual and product labeling, is acceptable provided that you make the following label revisions:

1. Place the statement "Keep Out of Reach of Children" directly above the signal word "Caution".
2. Revise the ingredient statement to read as follows:

Active Ingredient: Silver metallic.....0.07%
Inert Ingredient:.....99.93%
Total100%

3. Revise the Container Disposal Statement to read as follows, "Container Disposal: Remove HYgene media from top of filter bed, wrap in paper, and discard in trash".
4. Place the subheading "Direction For Use" on the top of page 8 of the Homeowner's Manual.

CONCURRENCES							
SYMBOL							
SURNAME							
DATE							

5. Place the misuse statement directly below the subheading "Directions For Use" which reads as follows:

"It is a violation of Federal Law to use this product in a manner inconsistent with its labeling".

6. Some indication must be given on the product labeling when the filter will reach the end of its useful life. The statement should read as follows:

"This unit will treat X gallons of water per day for X months".

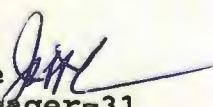
7. Revise the last section on page 4 of your Home Owner's Manual to read:

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Only use EPA Registered Hygene silver-impregnated Carbon replacement media in this unit. Use of any media material other than Hygene silver carbon manufactured by Ionics, Incorporated is a violation of the improper operation of the unit, and voids the manufacturer's warranty. For your protection, do not accept a replacement media unless it is factory-sealed with both the tape and label reading "Hygene" manufactured by Ionics, Incorporated.

A stamped copy of the labeling is enclosed for your records.

If you have any questions concerning this letter, please contact Karen M. Leavy at (703)-305-6966.

Sincerely yours,

John H. Lee 
Product Manager-31
Antimicrobial Program Branch
Registration Division (H7505-C)

**GENERAL IONICS®
MODEL IQ0820B
BACTERIOSTATIC WATER CONDITIONER
WITH HYGENE®**

Inhibits the growth of bacteria within the ion exchange softener
filter medium for municipally treated water.

CAUTION: KEEP OUT OF REACH OF CHILDREN

EPA Reg. No. 35900-3 EPA Est. No. 35900 PA 01

Storage of HYGENE® Material: Store in original container which excludes moisture
and chemical fumes.

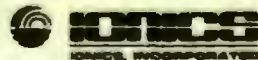
Active Ingredient: Silver as metallic	0.07%
Inert Ingredients: Cation Exchange Resin	80.00%
Gravel	13.33%
Activated Carbon	6.60%
Total Inert Ingredients	99.93%

Directions For Use: See Homeowner's Manual

Disposal Of Spent Media: Remove HYGENE® media from top of filter bed and place
in suitable container for disposing with trash.

Net Contents: One (1) Bacteriostatic Water Conditioner with HYGENE®

Another fine product by the manufacturers of General Ionics Water Conditioning Equipment



3039 Washington Pike, Bridgeville, PA 15017

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with COMMENTS
SEP 24 1953
Under U.S. Federal
Fungicide, and Rodenticide
as amended, for the
registered under EPA Reg. No.
35900-3



Model IQ Special Features

Meter-Controlled Regeneration

The Model IQ control minimizes salt usage and water waste by accurately monitoring the conditioned water and then initiating a regeneration only when the S-759 mineral is near exhaustion. Six-cycle downflow brining assures accurate salting while the adjustable time regeneration program uses the minimum amount of water required per cycle.

In service a mechanical meter accurately monitors water usage. This feature eliminates the costly wasted capacity due to premature regenerations.

Vacation Periods

There is no need to be concerned about disconnections or adjustments on your Model IQ Water Conditioner before leaving your home for long periods of time. When no water is being used, the "brain" will simply remain idle for that period of time and be ready to monitor water usage when you return home.

High Usage Demand/Weekend Guests

The Model IQ Water Conditioner's "brain" will automatically recognize the increase in water usage and regenerate before running out of conditioner water. Unpredictable water demand is never a problem with the General Ionics Model IQ.

How To Set The Time Of Day

If you should have a power failure or want to adjust for Daylight Savings Time, follow these instructions:

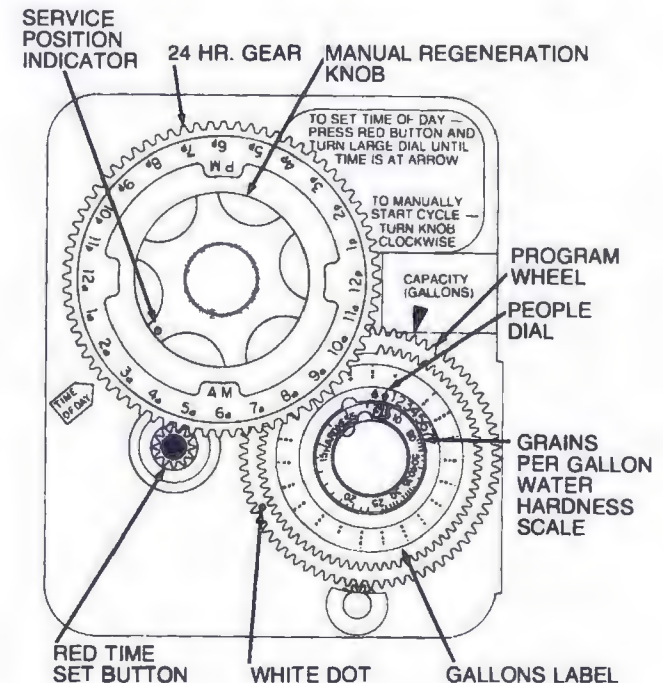
Press and hold in the red button to disengage the drive gear.

Turn the large gear until the actual time of day is opposite the time of day pointer.

Release the red button to engage the



Under the Federal Insecticide, Fungicide, and Rodenticide Act amended, for the pesticide registered under EPA Reg. No. 35900-3



How To Manually Regenerate Your Water Conditioner At Any Time

Turn the manual regeneration knob clockwise.

This slight movement of the manual regeneration knob engages the program wheel and starts the regeneration program.

The black center knob will make one revolution in the following three hours and stop in the position shown in the drawing.

Even though it takes three hours for this center knob to complete one revolution, the regeneration cycle of your unit might be set for only one-half of this time.

In any event, conditioned water may be drawn after rinse water stops flowing from the water conditioner drain line.



Model EE Special Features

Energy Efficient Control

This fully automatic six-cycle valve with 12-day timer schedules regenerations at preset intervals. The day and the hour for regeneration, as well as the salt dosage, have been set at the time of installation by the installer. These settings have been carefully calculated according to your family needs and to get the maximum recovery of the resin while minimizing water usage. **Do Not Change These Settings Without First Consulting Your Dealer.**

Vacation Periods

Why allow your water conditioner to continue regenerating while you are on vacation? It would be a waste of salt to recharge an already charged mineral bed. With your Energy Efficient General Ionics Model EE Water Conditioner, vacation time has been taken into account. Simply move the by-pass valve lever (see illustration on page 5 of this manual) until the indicator points to "by-pass". By doing so, the unit will continue to go through the preset regeneration cycles, but actually it will not regenerate. When you return home, move the by-pass valve lever back to the "service" position and you will again have conditioned water as before.

High Usage Demand/Weekend Guests

As mentioned previously, your General Ionics Model EE unit is set for your own needs. Higher than normal usage such as weekend guests will naturally place a greater demand for conditioned water on the unit. The method for manually regenerating the unit is covered on page 9. This "extra" regeneration will not interfere with the regular programmed cycle.

How To Set The Time Of Day

If you should have a power failure or want to adjust for Daylight Savings Time, follow these instructions:

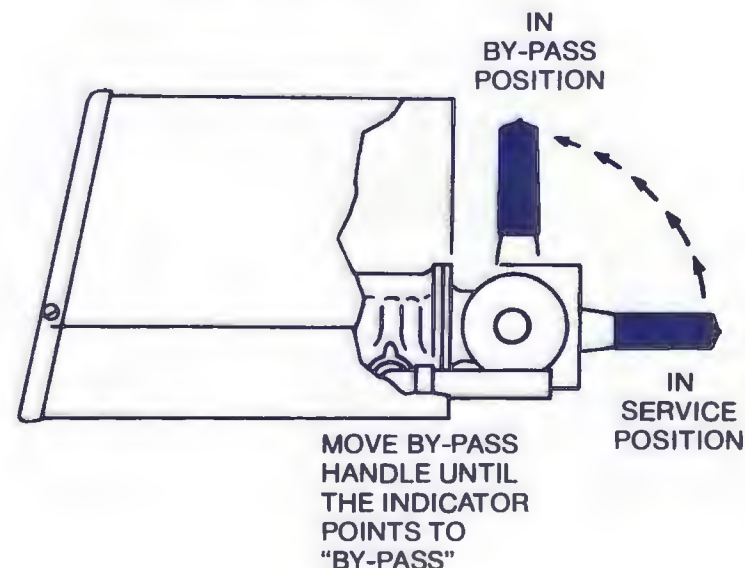
Press and hold in the red button to disengage the drive gear.

ACCEPTED
with COMMENTS
in EPA Letter Dated:

SEP 24 1993

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.

MODELS IQ AND EE



By-Pass Instruction

In case any problem should occur that cannot be immediately resolved, it is recommended to manually by-pass the unit as shown and call your authorized General Ionics dealer.

When To Add Salt

The brine tank has a capacity up to 250 lbs. of nugget or pellet salt. You can add salt whenever it is most convenient for you, but it is important to replenish the supply before the pellets reach the "add salt" level indicated by the label on the salt storage tank.

Bridging Or Caking

The salt platform in your brine tank has been engineered to eliminate salt bridging or caking. However, under certain atmospheric conditions these circumstances can occur and will prevent the salt from coming in contact with the water level. When your water seems to be hard, check the salt in the storage tank. If it appears to be bridging or caking, break it up with a short wooden stick. In doing so, be careful not to probe the full depth of the brine tank because you may damage the salt platform.

Bacteriostatic — An Ionics Exclusive

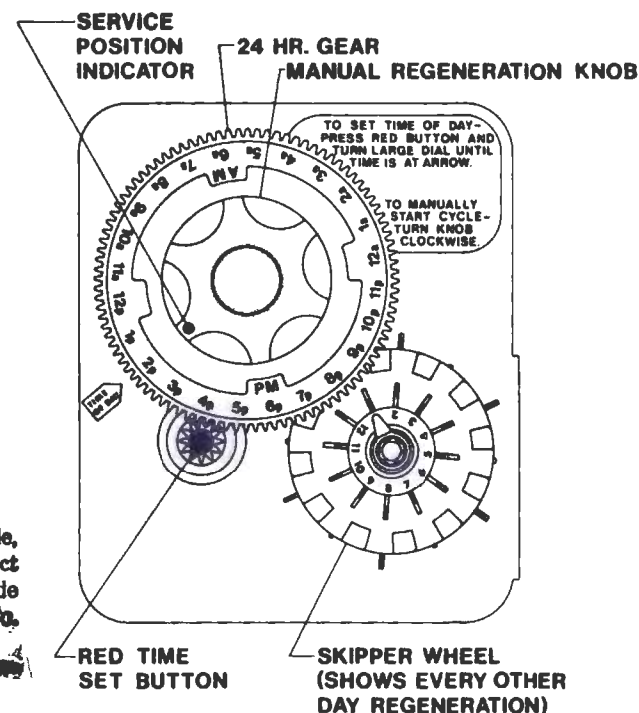
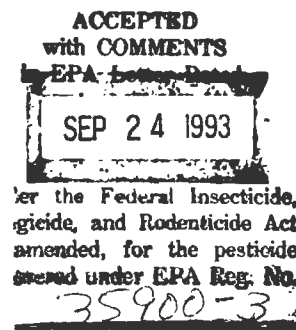
If your General Ionics Water Conditioner is an Environmental Protection Agency (EPA) Registered Bacteriostatic model, you have two unique added features. First, this unit inhibits the growth of bacteria within the S-759 ion exchange filter media bed. Second, it reduces and in many cases completely eliminates organic tastes, odors and colors from the water.

Inside the Bacteriostatic model water conditioner a layer of HYgene® silver-impregnated activated carbon (EPA-Registered Bacteriostatic Water Filter Media) is placed on top of the S-759 mineral. The silver acts as the inhibiting agent while the activated carbon adsorbs objectionable tastes, odors and colors.



IT IS A VIOLATION OF FEDERAL LAW to replace the EPA-registered silver-impregnated carbon media in any Ionics bacteriostatic unit with anything other than HYgene® silver carbon manufactured by Ionics, Incorporated. The installation of any other media will void the manufacturer's warranty. For your protection, do not accept a replacement media unless it is factory-sealed with both the tape and label reading "HYgene®" manufactured by Ionics, Incorporated.

EPA has restricted the Bacteriostatic models for use only on treated municipally supplied tap water, which precludes its use on well water.



Turn the large gear until the actual time of day is opposite the time of day pointer.

Release the red button to engage the drive gear.

How To Manually Regenerate Your Water Conditioner At Any Time

Turn the manual regeneration knob clockwise.

This slight movement of the manual regeneration knob engages the program wheel and starts the regeneration program.

The black center knob will make one revolution in the following three hours and stop in the position shown in the drawing.

Even though it takes three hours for this center knob to complete one revolution, the regeneration cycle of your unit might be set for only one-half of this time.

In any event, conditioned water may be drawn after rinse water stops flowing from the water conditioner drain line.

Questions And Answers

Q. What is water conditioning?

- A. Water conditioning is that branch of engineering that determines the chemical characteristics of a tap water supply, as it enters your home, and treats these characteristics so as to provide water more suitable and economical for household use.

Q. Why is it essential to improve water quality?

- A. Beyond being an absolute necessity of life, water is an outstanding cleaning agent. The trouble is that nature does a lot of things with water long before you have a chance to use it in your laundry or at your kitchen sink. You get it, as it were, second hand. Therefore, improving your water quality by water conditioning is just as essential as any other home appliance.

Q. Does the conditioned water have a "different" taste?

- A. Taste is difficult to define as no two people have the same sense of taste. A water conditioner will remove certain minerals and turbidity from the water, giving you a cleaner, better tasting water.

Q. Will conditioned water give a cleaner, brighter wash?

- A. Yes. For best results, you should use the proper amount of laundering agent. Keep in mind a 60 to 80% soap saving can be achieved with conditioned water. Learn to use less laundering agent because none of the cleansing compound will be wasted as in hard water cleaning. The amount of laundering agent you use depends on:
- (1) its effectiveness, (2) the volume and temperature of water, (3) the size of the wash load, and (4) the type and amount of dirt and grime.

Q. What effect will conditioned water have on plumbing?

- A. Before the water was conditioned, the hard water caused a scale build-up in the hot water pipes and water heater. Scale acts as an insulating material. In the water heater, scale reduces heat transmission, wastes fuel and often causes heating coil and tube failure. The installation of a water conditioner not only prevents further scale formation but will gradually remove previously formed scale deposits. A recent study indicates that softened water offers a saving of 23% in energy cost in the operation of a hot water heater.

Q. Are the minerals which a conditioner removes from hard water essential to health?

- A. No. The quantity of minerals found in hard water are not essential to good health.

Q. Is the sodium in softened water harmful to people on restrictive diets?

- A. Much depends on the strictness of the diet itself.

When the patient is on an extremely restrictive diet, he should drink neither hard nor softened water. Under these conditions he should have demineralized water, distilled water, or water known to be free of sodium for drinking and for the cooking of foods. Such patients are commonly hospitalized.

SEP
Under the
Fungicide,
as amended
registered

ACCEPTED
with COMMENTS
EPA Label Date
SEP 24 1993

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.

Regeneration

Your General Ionics Water Conditioning unit consists of a tank filled with a premeasured amount of a special mineral called S-759, formulated especially for General Ionics equipment. On top of the tank is the control valve/timer, which works on the same principle as an electric clock. Alongside the unit is a storage tank which holds the salt and brine for the regeneration cycle.

Regeneration means recharging or recleaning the special S-759 mineral. It is important to know that the entire cycle is automatic and you will have nothing to do with it. The following steps are for your own enlightenment. . . and to demonstrate the thoroughness of the automatic cycle: 1. Backwashing, which reverses the action of the water, throws off the sediment (called turbidity) that has been filtered out of the water, and flushes it down the drain. 2. Salt, as brine, is injected into the unit to clean and revitalize the S-759 mineral. (The amount of salt used is controlled by a float valve, which operates the same as the float in the water tank of your toilet.) 3. Slow rinse. 4. Fast rinse. 5. Valve automatically returns to the service position to again supply you with good, conditioned water.

What Salt To Use

Salt is your water conditioner's fuel. Using the right fuel is as important here as it is to get the best performance from your car. It is strongly recommended to use only nugget or pellet type salt in your water conditioner. This type of salt is pure and free of undesirable insolubles. Nugget or pellet type water conditioner salt is available from your General Ionics dealer.

NOTE: Common rock salt is NOT recommended because much of it contains insolubles. The continued use of common rock salt will necessitate more frequent cleaning of the brine tank, or worse, it may cause a malfunction of the valving. However, specially processed water conditioner rock salt, as handled by your local dealer, may be used.



ACCEPTED
with COMMENTS
In EPA Letter Dated

SEP 24 1993

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.

35900-3

General Information

Your General Ionics Water Conditioner is completely automatic. It will provide an abundance of conditioned water with just an occasional addition of salt to the brine tank when the salt reaches the "add salt" level. Your unit was thoroughly tested at the factory before shipping, and again at the time of installation.

The automatic timer is set to "regenerate" your water conditioner at night while you are sleeping. From experience, this is the best time because your water demand is lowest then and regeneration will not interfere with baths, washing clothes, etc. However, unconditioned water is available from all faucets during the regeneration cycle. With the General Ionics Water Conditioner you are never without water.

It is a good idea to wipe the unit occasionally and then apply a good coat of wax. This procedure will keep your water conditioner looking bright and clean for a lifetime.

In case some problem should arise, you can manually by-pass the unit by throwing one lever (see illustration on page 5). Then call your authorized General Ionics dealer. He has been trained in all phases of maintenance and repair work and will have the unit back in operation quickly. If there is not a General Ionics dealer in your vicinity, then contact another reliable water conditioning firm. Failing that, please write directly to the factory: Ionics, Incorporated, P.O. Box 99, Bridgeville, Pennsylvania 15017, Attention: Service Department.

NOTE: Whenever you correspond with the factory, be sure to include the model and serial number written on the inside back cover of this booklet. Explain the problem as best you can. With this information factory technicians can handle the problem promptly with little chance of error.

In establishing a salt-free diet for patients, physicians should not overlook the fact that even hard water may contain appreciable amounts of sodium. To determine the amount a complete analysis of the water is necessary.

Q. How much sodium is added to softened water?

A. Each grain per gallon (GPG) hardness removed adds 7.875 milligrams (mg) of sodium to a liter of water, which is approximately one quart. The average daily sodium intake of an adult individual is 3,000 to 4,000 milligrams and the average fluid intake is 1.6 to 2.0 liters per day. A liter is slightly more than four 8-ounce glasses of water. Two liters per day or 8.4 eight-ounce glasses of water amounts to a total sodium intake from a source of softened 8 GPG water of 125.16 milligrams. This is approximately 3% of the average daily sodium intake.

There is another way to answer this question, and that depends on the hardness of your raw water. The following table shows the additional amount of sodium consumed by drinking ONE quart of softened water.

Initial Water Hardness	Sodium Added By Softening
5 Grains/Gallon	37.5 Milligrams/Quart
10 Grains/Gallon	75.0 Milligrams/Quart
20 Grains/Gallon	150.0 Milligrams/Quart
40 Grains/Gallon	300.0 Milligrams/Quart

Q. How does this sodium content of conditioned water compare to sodium found in common foods?

A. The data in the following table demonstrate the usual range of sodium in common foods.

Food	Amount	Milligrams Of Sodium
Milk	2 Cups	226
Bread	2 Slices	322
Corn Flakes	1 Ounce	260
Tomato Juice	4 Ounces	504
Chili	1 Cup	1,194
Tomato Soup	1 Cup	932
Beef Broth	1 Cup	1,152
Frankfurter	1 Medium	610
Hamburger (Fast Food)	1/4 Pound	1,510
Catsup	1 Tablespoon	204
Canned Baked Beans	3/4 Cup	1,130
Canned Asparagus	1/2 Cup	560
Edam Beans	1/2 Cup	295
Cottage Cheese	4 Ounces	457
Parmesan Cheese	1 Ounce	528
Pretzels	1/4 Pound	1,925

It is important to note that about 2/3 of the daily water intake of any individual is through food and only about 1/3 from water itself.

General Ionics Water Conditioner LIMITED WARRANTY

This should be kept in a safe place by the owner.

GENERAL CONDITIONS

Ionics, Incorporated, Bridgeville, Pa., warrants that the General Ionics Water Conditioner to which this limited warranty applies is free from defects in material and workmanship. The attached limited warranty agreement card must be filled out, mailed to, and received by Ionics, Incorporated, within two (2) weeks of the date of installation of the equipment for this limited warranty to be effective.

This limited warranty is extended directly by the manufacturer to the owner, and is the sole warranty applicable. Any other warranties or guarantees, oral or written, expressed or implied, are not recognized.

LIMITED LIFETIME WARRANTY ON MINERAL TANK

This General Ionics Water Conditioning unit carries a limited warranty on the mineral tank. Any such mineral tank that becomes unusable because of leakage, corrosion, or rupture will be replaced or repaired at the option of Ionics, Incorporated. The defective tank must be returned to Ionics, Incorporated, transportation prepaid, within 30 days from date of failure for this limited warranty to be effective.

ELECTRICAL PARTS — LIMITED WARRANTY

Electrical components are warranted for a period of one (1) year of date of installation, provided the defective part is returned, prepaid to Ionics, Incorporated. Valve and/or control valve parts are warranted for a period of five (5) years from date of installation. Any such components found to be defective will be replaced or repaired, within five (5) years of date of installation, provided the defective part is returned, prepaid, to Ionics, Incorporated.

SALT STORAGE TANK — LIMITED WARRANTY

There is a five (5) year warranty on salt storage tank. Any such storage tank that becomes unusable because of leakage or corrosion will be replaced or repaired at the option of Ionics, Incorporated. The original tank must be returned to Ionics, Incorporated, transportation prepaid, within 30 days from date of failure for this limited warranty to be effective.

Salt Storage Tank components are warranted for a period of one (1) year of date of installation, provided the defective parts are returned prepaid to Ionics, Incorporated.

ION EXCHANGE RESIN — LIMITED WARRANTY

The S-759 high capacity ion exchange resin housed in the mineral tank carries a limited warranty of one (1) year. A resin sample must be sent to Ionics, Incorporated for testing prior to its replacement under warranty. If the resin is found to be incapable of softening the water because of a flaw in its manufacture, it will be replaced. Warranty does not apply to resin which has been frozen, has become fouled by iron due to improper maintenance, or is found to be ineffective due to any other outside form of neglect.

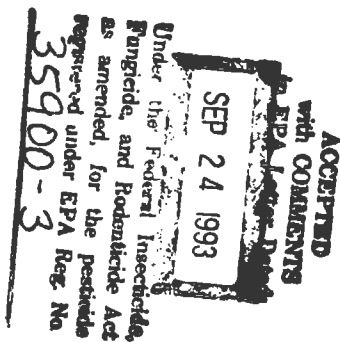
Congratulations

Ionics, Incorporated welcomes you to a new, carefree way of life with conditioned water. You can take pride and satisfaction knowing that you own the very best. We are proud that you have selected the General Ionics deluxe quality Water Conditioner for your home. Your sound judgment is supported by the wide acceptance received for these units throughout the world. More and more quality conscious homeowners are purchasing General Ionics Water Conditioning equipment because of its superior performance and its premium quality workmanship.

The following pages of this booklet will introduce you to your new General Ionics Water Conditioner by explaining operation, care and maintenance. In addition, the booklet provides recommendations for getting the very best performance from your unit as well as answers to commonly asked questions.

Sheldon Golman

Vice President
Household Water Conditioning
Ionics, Incorporated



IMPORTANT

This booklet contains your Owner Limited Warranty Card. Be sure that it is filled in and mailed to the factory within two weeks of installation. Failure to do so will result in voiding the warranty.

Your General Ionics Dealer is...

BACTERIOSTATIC MODELS — SILVER CARBON REPLACEMENT

IT IS A VIOLATION OF FEDERAL LAW to replace the EPA-registered silver-impregnated carbon media in any Ionics bacteriostatic unit with anything other than HYgene® silver carbon manufactured by Ionics, Incorporated. The installation of any other media will void this warranty. For your protection, do not accept a replacement media unless it is factory-sealed with both the tape and label reading "HYgene®" manufactured by Ionics, Incorporated.

EXTENT OF LIMITED WARRANTY

Under terms of this limited warranty, all tanks are replaced or repaired by Ionics, Incorporated on the basis of F.O.B. manufacturer's plant. Transportation, labor, installation, and service costs are to the customer's account and are not covered by this limited warranty.

LIMITATIONS OF WARRANTY

This limited warranty shall be effective only if the Water Conditioner covered by the limited warranty is properly installed in accordance with installation and operating instructions furnished with the equipment by Ionics, Incorporated, and in accordance with the local plumbing codes and ordinances.

This limited warranty shall be void if any part of the Water Conditioner has been subjected to accident, alteration, abuse, neglect or freezing.

This limited warranty shall not be assignable by the original purchaser and applies only to the original equipment.

Model Number _____ Tank Number _____
Date Installed _____
Dealer _____
Address _____
Telephone _____

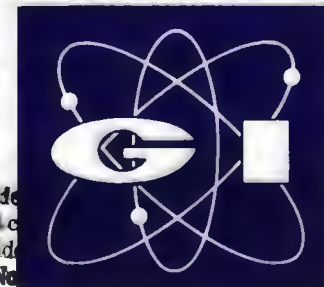
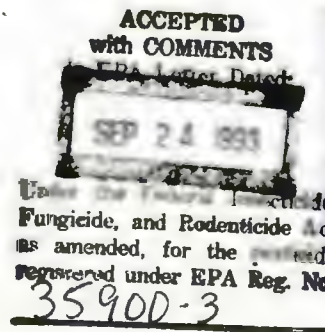


IONICS

IONICS, INCORPORATED
P.O. Box 99 • Bridgeville, PA 15017

HOMEOWNER'S MANUAL

GENERAL IONICS WATER CONDITIONER Model IQ and Model EE



IONICS

IONICS, INCORPORATED

P.O. Box 99
Bridgeville, PA 15017

INTERNATIONAL WATER CONSULTANTS AND
EQUIPMENT MANUFACTURERS • MEMBER
WATER QUALITY ASSOCIATION

IONICS, INCORPORATED



IONICS
IONICS, INCORPORATED

P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE 412-343-1040 FAX 412-257-1270

CERTIFIED MAIL

June 15, 1993

Mr. John H. Lee, PM 31
Antimicrobial Program Branch
Registration Division (H-7505C)
Environmental Protection Agency
401 M Street
Washington, D.C. 20460

Subject: Application for Pesticide Amendment to:

- (1) EPA Reg. No. 35900-3, General Ionics Model
IQ 0820 B Bacteriostatic Water Conditioner
- (2) EPA Reg. No. 35900-9, General Ionics Model
IQ 1240 B Bacteriostatic Water Conditioner

Dear Mr. Lee:

In response to the telephone request of this date from your Ms. Karen Leady, for completion of our above subject registration amendment, please find enclosed the following:

- 4 - Homeowner's Manual Booklet which includes the
change we are requesting in our Application
for Amendment.
- 2 - Water Conditioner Tank Labels for the Model
IQ 0820 B.
- 2 - Water Conditioner Tank Labels for the Model
IQ 1240 B.

We trust this is the information you require for approval of changes in our Homeowner's Manual. I will look forward to hearing from you.

Very truly yours,

IONICS, INCORPORATED

John D. Collins
Manager, Laboratory

Enclosures
JDC/ml

cc: Mr. Walter J. Polens, Ionics, Inc.

5442660

Record Number

Reference Number

Input Date

COODING FORM FOR APPLICATIONS FOR REGISTRATION/AMENDMENTS

File Symbol/Req. No. 35900-3 PH. 31 | 8 | Action Code 320

|10| Descriptor (Amend/Resubmissions only)

|5| Interstate Call-In ☐ (Y) Yes |15| Child-resistant Packaging ☐ (C) Certified
☐ (N) No ☐ (S) Service F

|20| Registration Type:

☐ (1) Conditional ☐ (2) Unconditional

|25| Proposed Classification: |30| Final Classification:

☐ (R) Restricted ☐ (R) Restricted
☐ (G) General ☐ (N) Not Classified

☐ (R) Non-resid Use Or
☐ (N) Not-Appl

|35| Date on Application:

01 | 5 | 25 | 93
 MO DAY YR

|04| EPA Received Date:

01 | 6 | 02 | 93
 MO DAY YR

|40| Date Received by F

01 | 6 | 03 | 93
 MO DAY YR

|80| Method of Support:

☐ (1) Cite-All ☐ (6) Owner Submission
☐ (4) Not Applicable ☐ (7) Total Submission
☐ (5) Not Submitted ☐ (8) Selective Method

Reviews Requested:

RD
 PL
 CR
 EP

DATE SENT	DUE DATE	DATE RETURNED

RESPONSE CODE	RESPONSE DATE

|108| Status: Telephone call - registrant will send
copies of Homeowner's manuals.

|115| FINAL Response APPROVAL Code

38

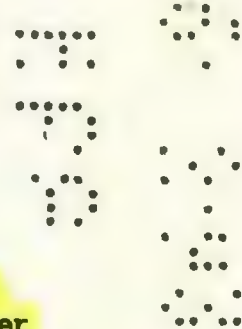
|120| Response TO. 61.1.546

**IONICS****IONICS, INCORPORATED**

P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE 412-343-1040 FAX 412-257-1270

May 25, 1993

Mr. John H. Lee, PM 31
Antimicrobial Program Branch
Registration Division (H-7505C)
Environmental Protection Agency
401 M Street
Washington, DC 20460



Subject: Application for Pesticide Amendment to:

- (1) EPA Registration No. 35900-3, General Ionics
Model IQ 0820 B Bacteriostatic Water Conditioner
- (2) EPA Registration No. 35900-9, General Ionics
Model IQ 1240 B Bacteriostatic Water Conditioner

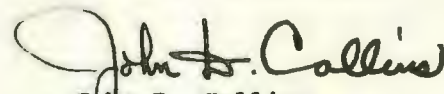
Dear Mr. Lee:

Please find enclosed our Application for Amendment for two of our EPA registered products along with five draft copies of each page in which proposed changes are to be made.

We trust you will find these applications in proper order. I will look forward to hearing from you concerning your acceptance.

Very truly yours,

IONICS, INCORPORATED


John D. Collins
Manager, Laboratory

Enclosures
JDC/ml

cc: Mr. Walter J. Polens

ENCLOSURE NO. 1
(EPA REG. NO. 35900-3)

IMPORTANT

This booklet contains your Owner Limited Warranty Card. Be sure that it is filled in and mailed to the factory within two weeks of installation. Failure to do so will result in voiding the warranty.

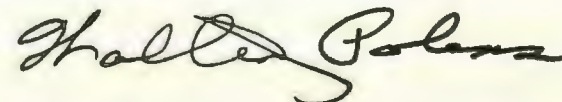
Your General Ionics Dealer Is...

Congratulations

Ionics, Incorporated welcomes you to a new, carefree way of life with conditioned water. You can take pride and satisfaction knowing that you own the very best.

We are proud that you have selected the General Ionics deluxe quality Water Conditioner for your home. Your sound judgment is supported by the wide acceptance received for these units throughout the world. More and more quality conscious homeowners are purchasing General Ionics Water Conditioning equipment because of its superior performance and its premium quality workmanship.

The following pages of this booklet will introduce you to your new General Ionics Water Conditioner by explaining operation, care and maintenance. In addition, the booklet provides recommendations for getting the very best performance from your unit as well as answers to commonly asked questions.



Vice President
Household Water Conditioning
Ionics, Incorporated

When To Add Salt

The brine tank has a capacity up to 250 lbs. of nugget or pellet salt. You can add salt whenever it is most convenient for you, but it is important to replenish the supply before the pellets reach the "add salt" level indicated by the label on the salt storage tank.

Bridging Or Caking

The salt platform in your brine tank has been engineered to eliminate salt bridging or caking. However, under certain atmospheric conditions these circumstances can occur and will prevent the salt from coming in contact with the water level. When your water seems to be hard, check the salt in the storage tank. If it appears to be bridging or caking, break it up with a short wooden stick. In doing so, be careful not to probe the full depth of the brine tank because you may damage the salt platform.

Bacteriostatic — An Ionics Exclusive

If your General Ionics Water Conditioner is an Environmental Protection Agency (EPA) Registered Bacteriostatic model, you have two unique added features. First, this unit inhibits the growth of bacteria within the S-759 ion exchange filter media bed. Second, it reduces and in many cases completely eliminates organic tastes, odors and colors from the water.

Inside the Bacteriostatic model water conditioner a layer of HYgene® silver-impregnated activated carbon (EPA-Registered Bacteriostatic Water Filter Media) is placed on top of the S-759 mineral. The silver acts as the inhibiting agent while the activated carbon adsorbs objectionable tastes, odors and colors.

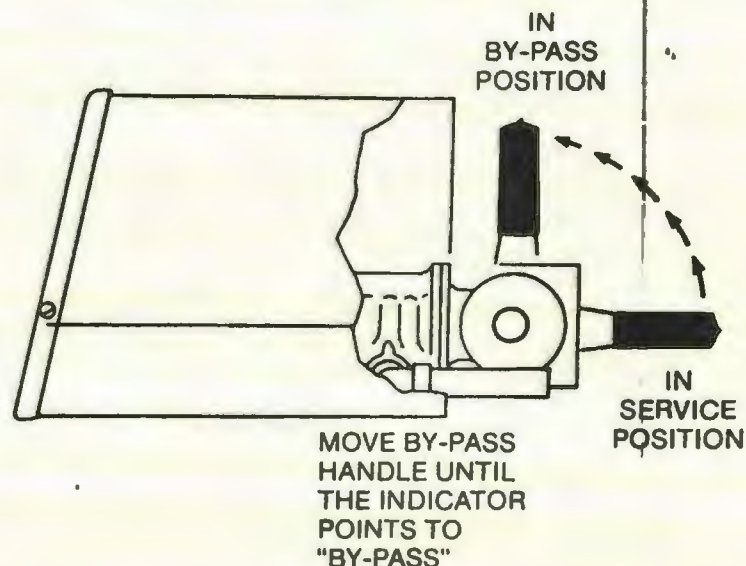


IT IS A VIOLATION OF FEDERAL LAW to replace the EPA-registered silver-impregnated carbon media in any Ionics bacteriostatic unit with anything other than HYgene® silver carbon manufactured by Ionics, Incorporated. The installation of any other media will void the manufacturer's warranty. For your protection, do not accept a replacement media unless it is factory-sealed with both the tape and label reading "HYgene®" manufactured by Ionics, Incorporated.

EPA has restricted the Bacteriostatic models for use only on treated municipally supplied tap water, which precludes its use on well water.

ENCLOSURE NO. 2
(EPA REG. NO. 35900-3)

MODELS IQ AND EE



By-Pass Instruction

In case any problem should occur that cannot be immediately resolved, it is recommended to manually by-pass the unit as shown and call your authorized General Ionics dealer.

General Ionics Water Conditioner LIMITED WARRANTY

This should be kept in a safe place by the owner.

GENERAL CONDITIONS

Ionics, Incorporated, Bridgeville, Pa., warrants that the General Ionics Water Conditioner to which this limited warranty applies is free from defects in material and workmanship. The attached limited warranty agreement card must be filled out, mailed to, and received by Ionics, Incorporated, within two (2) weeks of the date of installation of the equipment for this limited warranty to be effective.

This limited warranty is extended directly by the manufacturer to the owner, and is the sole warranty applicable. Any other warranties or guarantees, oral or written, expressed or implied, are not recognized.

LIMITED LIFETIME WARRANTY ON MINERAL TANK

This General Ionics Water Conditioning unit carries a limited warranty on the mineral tank. Any such mineral tank that becomes unusable because of leakage, corrosion, or rupture will be replaced or repaired at the option of Ionics, Incorporated. The defective tank must be returned to Ionics, Incorporated, transportation prepaid, within 30 days from date of failure for this limited warranty to be effective.

ELECTRICAL PARTS — LIMITED WARRANTY

Electrical components are warranted for a period of one (1) year of date of installation, provided the defective part is returned, prepaid to Ionics, Incorporated. Valve and/or control valve parts are warranted for a period of five (5) years from date of installation. Any such components found to be defective will be replaced or repaired, within five (5) years of date of installation, provided the defective part is returned, prepaid, to Ionics, Incorporated.

SALT STORAGE TANK — LIMITED WARRANTY

There is a five (5) year warranty on salt storage tank. Any such storage tank that becomes unusable because of leakage or corrosion will be replaced or repaired at the option of Ionics, Incorporated. The original tank must be returned to Ionics, Incorporated, transportation prepaid, within 30 days from date of failure for this limited warranty to be effective.

Salt Storage Tank components are warranted for a period of one (1) year of date of installation, provided the defective parts are returned prepaid to Ionics, Incorporated.

ION EXCHANGE RESIN — LIMITED WARRANTY

The S-759 high capacity ion exchange resin housed in the mineral tank carries a limited warranty of one (1) year. A resin sample must be sent to Ionics, Incorporated for testing prior to its replacement under warranty. If the resin is found to be incapable of softening the water because of a flaw in its manufacture, it will be replaced. Warranty does not apply to resin which has been frozen, has become fouled by iron due to improper maintenance, or is found to be ineffective due to any other outside form of neglect.

BACTERIOSTATIC MODELS — SILVER CARBON REPLACEMENT

IT IS A VIOLATION OF FEDERAL LAW to replace the EPA-registered silver-impregnated carbon media in any Ionics bacteriostatic unit with anything other than HYgene® silver carbon manufactured by Ionics, Incorporated. The installation of any other media will void this warranty. For your protection, do not accept a replacement media unless it is factory-sealed with both the tape and label reading "HYgene®" manufactured by Ionics, Incorporated.

EXTENT OF LIMITED WARRANTY

Under terms of this limited warranty, all tanks are replaced or repaired by Ionics, Incorporated on the basis of F.O.B. manufacturer's plant. Transportation, labor, installation, and service costs are to the customer's account and are not covered by this limited warranty.

LIMITATIONS OF WARRANTY

This limited warranty shall be effective only if the Water Conditioner covered by the limited warranty is properly installed in accordance with installation and operating instructions furnished with the equipment by Ionics, Incorporated, and in accordance with the local plumbing codes and ordinances.

This limited warranty shall be void if any part of the Water Conditioner has been subjected to accident, alteration, abuse, neglect or freezing.

This limited warranty shall not be assignable by the original purchaser and applies only to the original equipment.

Model Number _____ Tank Number _____

Date Installed _____

Dealer _____

Address _____


Telephone _____



IONICS

IONICS, INCORPORATED

P.O. Box 99 • Bridgeville, PA 15017

(A) 	United States Environmental Protection Agency Office of Pesticide Programs (H7505C) Washington, DC 20460 Application for Pesticide:	<input type="checkbox"/> Registration <input checked="" type="checkbox"/> Amendment <input type="checkbox"/> Other	OPP Identifier Number <div style="font-size: 1.5em; color: red; text-align: center;">165876</div>
--	---	---	--

Section I

1. Company/Product Number 35900-3	2. EPA Product Manager JOHN H. LEE	3. Proposed Classification <input type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) GENERAL IONICS MODEL IQ 0820 B BACTERIOSTATIC WATER CONDITIONER	PM# 31	
5. Name and Address of Applicant (Include ZIP Code) IONICS, INCORPORATED 3039 WASHINGTON PIKE P.O. BOX 99 BRIDGEVILLE, PA 15017 <input type="checkbox"/> Check if this is a new address		6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____

Section II

<input checked="" type="checkbox"/> Amendment - Explain below <input type="checkbox"/> Resubmission in response to Agency letter dated _____ <input type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____ <input type="checkbox"/> "Me Too" Application. <input type="checkbox"/> Other - explain below.
---	---

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

CHANGES IN HOMEOWNER'S MANUAL AS FOLLOWS:

ENCLOSURE 1. FIRST INSIDE PAGE WHICH BEGINS WITH "CONGRATULATION". AT THE BOTTOM OF THE PAGE CHANGE THE SIGNATURE TO "WALTER J. POLENS FOLLOWED BY HIS TITLE "VICE PRESIDENT, HOUSEHOLD WATER CONDITIONING, IONICS, INCORPORATED".

(CONTINUED ON ATTACHED PAGE)

Section III

1. Material This Product Will Be Packaged In:			
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No If "Yes," Unit Package wgt. _____ No. per container _____	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No If "Yes," Package wgt. _____ No. per container _____	2. Type of Container <input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) of Retail Container	
5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product		6. Manner in Which Label Is Affixed To Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled <input type="checkbox"/> Other (Specify) _____	

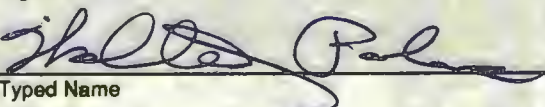
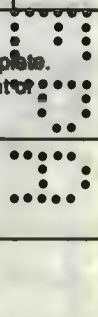
Section IV

1 Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)

Name	Title	Telephone No. (Include Area Code)
------	-------	-----------------------------------

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment both under applicable law.

2. Signature 	3. Title VICE PRESIDENT	6. Date Application Received (Stamped) 
4. Typed Name WALTER J. POLENS	5. Date 5/25/93	

Paperwork Reduction Act Notice and Instructions

Paperwork Reduction Act Notice

Public reporting burden for this collection of information is estimated to average of 0.85 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

Instructions

General

This form is to be used for all applications for new and amended registrations for pesticide products.

In order to process an application for new registration submitted on this form, the following material must accompany the application:

1. Offer to Pay Statement (EPA Form 8570-22, -23, or -24). (If not exempted by 40 CFR 162.9-1(b).)
2. Confidential Statement of Formula (EPA Form 8570-4).
3. Five copies of draft labeling.
4. Three copies of any data submitted.

Submission of Labeling - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8 1/2 x 11 inch paper or as a mockup of the proposed label. If prepared as a mockup it should be constructed in such a way as to facilitate storage in an 8 1/2 x 11 inch file. Mockup labels significantly smaller than 8 1/2 x 11 inches should be mounted on 8 1/2 x 11 inch paper for submission.

Submission of Data - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

Specific

Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Section I, III, and IV must be completed by the applicant. For applications submitted in connection with amended registration actions, Section I, II, and IV must be completed by the applicant.

Block A - Check the appropriate action for which you are submitting this form.

Section I - This Section must be completed for both Registration and Amended Registration actions.

1. **Company/Product Number** - Insert your company number, if one has been assigned. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If application is for an amendment, insert the registration number of the product.
2. **Date** - Fill in the appropriate date.
3. **Product Manager** - If known, fill in the name and number of the Product Manager.
4. **Proposed Classification** - Specify the proposed classification for this product.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters.

EPA Form 8570-1 (Rev. 12-80)

An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.

6. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.

Amendment Information

Section II - This Section must be completed for all applications submitted in connection with Amended Registration.

1. **Subject of Amendment** - Check the appropriate block, and provide a brief explanation of the purpose(s) for the amendment, such as: "the addition of a site, pest, or crop"; "to change inert ingredient"; "general label revisions of precautionary statements," etc.

Packaging and Container Information

Section III - This Section must be completed for all applications submitted in connection with New Registration.

1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Specify the net contents of all retail containers for your product.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicate the method product labeling is attached to retail container.

Contact Point

Section IV - This Section must be completed for all Registration and Amended Registration applications.

- 1-5. Self-explanatory.
6. EPA Use Only.



IONICS
IONICS, INCORPORATED

P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE 412-343-1040 FAX 412-257-1270

ENCLOSURE 2

PAGE 4 OF HOMEOWNER'S MANUAL, NEAR THE BOTTOM OF THE PAGE, ADD THE PARAGRAPH "IT IS A VIOLATION OF FEDERAL LAW TO REPLACE THE EPA-REGISTERED SILVER IMPREGNATED CARBON MEDIA IN ANY IONICS BACTERIOSTATIC UNIT WITH ANYTHING OTHER THAN HYGENE® SILVER CARBON MANUFACTURED BY IONICS, INCORPORATED. THE INSTALLATION OF ANY OTHER MEDIA WILL VOID THE MANUFACTURER'S WARRANTY. FOR YOUR PROTECTION, DO NOT ACCEPT A REPLACEMENT MEDIA UNLESS IT IS FACTORY-SEALED WITH BOTH THE TAPE AND LABEL READING "HYGENE® MANUFACTURED BY IONICS, INCORPORATED".

NOTE: EPA PR NOTICE 88-6, PAGE 2, SECTION II, A. PRODUCT CHEMISTRY CHANGE, 1. ACTIVE INGREDIENT WAS USED AS REFERENCE FOR THIS ADDITION.

ENCLOSURE 3

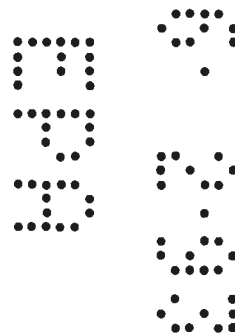
LAST PAGE OF THE HOMEOWNER'S MANUAL TITLED "GENERAL IONICS WATER CONDITIONER-LIMITED WARRANTY". ADD TWO PARAGRAPHS IN THE MIDDLE OF THE PAGE AS FOLLOWS:

ION EXCHANGE RESIN - LIMITED WARRANTY

THE S-759 HIGH CAPACITY ION EXCHANGE RESIN HOUSED IN THE MINERAL TANK CARRIES A LIMITED WARRANTY OF ONE (1) YEAR. A RESIN SAMPLE MUST BE SENT TO IONICS, INCORPORATED FOR TESTING PRIOR TO ITS REPLACEMENT UNDER WARRANTY. IF THE RESIN IS FOUND TO BE INCAPABLE OF SOFTENING THE WATER BECAUSE OF A FLAW IN ITS MANUFACTURE, IT WILL BE REPLACED. WARRANTY DOES NOT APPLY TO RESIN WHICH HAS BEEN FROZEN, HAS BECOME FOULED BY IRON DUE TO IMPROPER MAINTENANCE, OR IS FOUND TO BE INEFFECTIVE DUE TO ANY OTHER OUTSIDE FORM OF NEGLIGENCE.

BACTERIOSTATIC MODELS - SILVER CARBON REPLACEMENT

IT IS A VIOLATION OF FEDERAL LAW TO REPLACE THE EPA-REGISTERED SILVER-IMPREGNATED CARBON MEDIA IN ANY IONICS BACTERIOSTATIC UNIT WITH ANYTHING OTHER THAN HYGENE® SILVER CARBON MANUFACTURED BY IONICS, INCORPORATED. THE INSTALLATION OF ANY OTHER MEDIA WILL VOID THIS WARRANTY. FOR YOUR PROTECTION, DO NOT ACCEPT A REPLACEMENT MEDIA UNLESS IT IS FACTORY SEALED WITH BOTH THE TAPE AND LABEL READING "HYGENE® MANUFACTURED BY IONICS, INCORPORATED."



DATE: 6-3-93

TO: FILE ROOM _____
DOCUMENT CENTER _____
PRODUCT MANAGER _____ 3 /
PAM (ROOM 263) _____

FROM: FRANCES WRICETYPE OF REGISTRATION**FAST - TRACK ACTION (with data/without data)**

This action has been determined to be a fast-track action by FEPS and must be entered in the PRATS using one of the following codes:

- 160 - Application for "me-to" registration
- 170 - Application for registration - old chemical - "Me-too" with additional use.
- 300 - Amendment - label revision - administrative (no data required).
- 305 - Amendment - label revision - data required does not need HED/EFED review.
- 310 - Amendment - added "me-too" Use - no HED/EFED review needed.
- 345 - Formula change - no HED/EFED review required.

REGULAR REGISTRATION (with data/without data)**24C NEW****24C AMENDMENT****RESUBMISSION (response to Agency ltr)****FINAL PRINTED LABELS****OTHER**MESSAGE: _____



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

06/03/93

WALTER J. POLENS
IONICS, INCORPORATED
3039 WASHINGTON PIKE
BRIDGEVILLE PA 15017

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Product Name: GEN.IONICS MODEL IQ 0820 B BACTERI.WTR. CONDITONE
Company Name: IONICS, INCORPORATED
Application No.: 165876
EPA Reg. No.: 35900-3
EPA Receipt Date: 06/02/93

Subject: Front End Screen for an Amendment

Dear Sir or Madam:

Your application for registration has been received by the Office of Pesticide Programs and has passed a preliminary screen for completeness. It will be placed in line for review to determine its acceptability. The application will be processed in chronological order of receipt.

Although the 1988 FIFRA amendments mandate EPA to review applications for expedited registration or amendments within 90 days, this turnaround time will not be met immediately due to the backlog of applications received before December 24, 1988. However, EPA is increasing human and automated resources and making necessary procedural changes in order to eliminate the backlog and to meet the 90-day response time as soon as possible.

If you have any questions, you may contact John Lee, Product Manager 31, at (703)-305-5675.

Sincerely,

Edith M. Minor

Team Leader
Front End Processing Staff
Registration Support Branch
Registration Division (H7504C)



Recycled/Recyclable
Printed with Soy/Canola Ink on paper that
contains at least 50% recycled fiber

ATTACHED NOTIFICATION

TO: PM File Room
FROM: 31 REG. SUPPORT BR.

match-31

EPA REG. NO. 35900-3

COMPANY NAME _____

NO NEW LABEL ☒

NEW LABEL ATTACHED _____

NEW CSF ATTACHED _____

.....

☒ THIS IS AN ADDITIONAL BRAND NAME


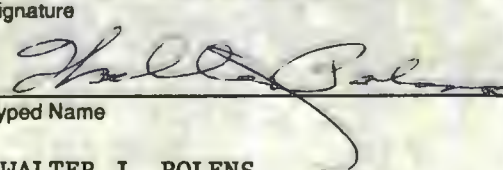
_____ THIS IS A CSF PERMITTED UNDER PR NOTICE 88-6

_____ THIS IS A LABEL CHANGE PERMITTED UNDER PR NOTICE 88-6

.....

☒ THIS WAS SENT TO SIG FOR CODING AND/OR MICROFICHING

_____ FILE IN JACKET

(A)  NOTIFICATION		United States Environmental Protection Agency Office of Pesticide Programs (H7505C) Washington, DC 20460 Application for Pesticide:		<input type="checkbox"/> Registration <input type="checkbox"/> Amendment <input checked="" type="checkbox"/> Other		OPP Identifier Number <div style="font-size: 1.5em; font-weight: bold;">165871</div>	
Section I							
1. Company/Product Number 35900-3				2. EPA Product Manager JOHN H. LEE		3. Proposed Classification	
4. Company/Product (Name) GENERAL IONICS MODEL IQ 0820 B BACTERIOSTATIC WATER CONDITIONER				PM# PM-31		<input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted	
5. Name and Address of Applicant (Include ZIP Code) IONICS, INCORPORATED P.O. BOX 99 3039 WASHINGTON PIKE BRIDGEVILLE, PA 15017 <input type="checkbox"/> Check if this is a new address				6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____			
Section II							
<input type="checkbox"/> Amendment - Explain below <input type="checkbox"/> Resubmission in response to Agency letter dated _____ <input checked="" type="checkbox"/> Notification - Explain below.				<input type="checkbox"/> Final printed labels in response to Agency letter dated _____ <input type="checkbox"/> "Me Too" Application. <input type="checkbox"/> Other - explain below.			
Explanation: Use additional page(s) if necessary. (For section I and Section II.) <u>ADDITIONAL BRAND NAME REQUEST</u> GENERAL IONICS MODEL IQ 0820 PB BACTERIOSTATIC WATER CONDITIONER							
Section III							
1. Material This Product Will Be Packaged In:							
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No		Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No If "Yes," Unit Package wgt. No. per container		Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No If "Yes," Package wgt. No. per container		2. Type of Container <input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____	
Certification must be submitted.							
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container			4. Size(s) of Retail Container		5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product		
6. Manner In Which Label Is Affixed To Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Other (_____) <input type="checkbox"/> Stenciled							
Section IV							
1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)							
Name WALTER J. POLENS			Title VICE PRESIDENT			Telephone No. (Include Area Code) (412) 343-1040	
Certification						6. Date Application Received (Stamped)	
I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.							
2. Signature 			3. Title VICE PRESIDENT				
4. Typed Name WALTER J. POLENS			5. Date MAY 14, 1992				

Paperwork Reduction Act Notice and Instructions

Paperwork Reduction Act Notice

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2. Confidential Statement of Formula (EPA Form 8570-4).
3. Five copies of draft labeling.
4. Three copies of any data submitted.

Submission of Labeling - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8 1/2 x 11 inch paper or as a mockup of the proposed label. If prepared as a mockup it should be constructed in such a way as to facilitate storage in an 8 1/2 x 11 inch file. Mockup labels significantly smaller than 8 1/2 x 11 inches should be mounted on 8 1/2 x 11 inch paper for submission.

Submission of Data - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

Specific

Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Section I, III, and IV must be completed by the applicant. For applications submitted in connection with amended registration actions, Section I, II, and IV must be completed by the applicant.

Block A - Check the appropriate action for which you are submitting this form.

Section I - This Section must be completed for both Registration and Amended Registration actions.

1. **Company/Product Number** - Insert your company number, if one has been assigned. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If application is for an amendment, insert the registration number of the product.
2. **Date** - Fill in the appropriate date.
3. **Product Manager** - If known, fill in the name and number of the Product Manager.
4. **Proposed Classification** - Specify the proposed classification for this product.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters.

An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.

6. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.

Amendment Information

Section II - This Section must be completed for all applications submitted in connection with Amended Registration.

1. **Subject of Amendment** - Check the appropriate block, and provide a brief explanation of the purpose(s) for the amendment, such as: "the addition of a site, pest, or crop"; "to change inert ingredient"; "general label revisions of precautionary statements," etc.

Packaging and Container Information

Section III - This Section must be completed for all applications submitted in connection with New Registration.

1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Specify the net contents of all retail containers for your product.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicate the method product labeling is attached to retail container.

Contact Point

Section IV - This Section must be completed for all Registration and Amended Registration applications.

- 1-5. Self-explanatory.
6. EPA Use Only.

Record Number 8391147

Reference Number

Input Date

CODING FORM FOR APPLICATIONS FOR REGISTRATION/AMENDMENTS

File Symbol/Reg. No. 35900-3 PM 81 ☒ Action Code 300

☒ Descriptor (Amend/Resubmissions only) Additional Brand Name

☒ Intrastate Call-In ☐ (Y) Yes ☐ Child-Resistant Packaging ☐ (C) Certification
☐ (N) No ☐ (S) Service Person

☒ Registration Type:

☐ (R) Non-Residential Use Only

☐ (N) Not-Applicable

☐ (1) Conditional ☐ (2) Unconditional
☒ Proposed Classification: ☒ Final Classification

☐ (R) Restricted ☐ (R) Restricted
☐ (G) General ☐ (N) Not Classified

☒ Date on Application:

☒ EPA Received Dated:

☒ Date Received by PM:

12 04 90
MO DAY YR

12 10 90
MO DAY YR

12 11 90
MO DAY YR

☒ Method of Support:

☐ (1) Cite-All ☐ (6) Owner Submission
☐ (2) Not Applicable ☐ (7) Total Submission
☐ (3) Not Submitted ☐ (8) Selective Method

Reviewers Requested:

DATE SENT	DUE DATE	DATE RETURNED
RD		
PM		
PL		
CH		
EF		

RESPONSE CODE RESPONSE DATE

☒ Status:

☒ FINAL ACTION Response Code 38

☒ Response Date 02/21/91 59

75-DAY RESPONSE DUE DATE: ☐ (Y) Yes

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Ionics, Incorporated
P. O. Box 99
Washington Pike
Bridgeville, PA 15017

Attention: Walter A. Polens

Gentleman:

<u>Product Name</u>	<u>Registration Number</u>
Subject: General Ionics Model IQ1690B Bacteriostatic Water Conditioner	35900-3
General Ionics Model IQ1240B Bacteriostatic Water Conditioner	35900-9
General Ionics Model IQ1690B Bacteriostatic Water Conditioner	35900-12
General Ionics Model DWC1500 Bacterio- static Drinking Water Conditioner	35900-13
General Ionics Model 200,000 Bacteriostatic Whole House Water Filter	35900-18

The registration record for the product referenced above has been amended to include the additional brand name(s) listed below:

<u>Additional Brand Name</u>	<u>Registration Number</u>
Hygiene Replacement Media- General Ionics Bacterio- static Water Conditioner	35900-3
Hygiene Replacement Media- General Ionics Bacteriostatic Water Conditioner	35900-9

CONCURRENCES							
SYMBOL							
SURNAME							
DATE							

EPA Form 1320-1 (12-70) *U.S.GPO:1989-624-483/10186 OFFICIAL FILE COPY

Hygiene Replacement Media-
General Ionics Bacteriostatic
Water Conditioner

35900-12

HY-10 Hygiene Replacement
Cartridge For General Ionics
Model DWC-1500 Bacteriostatic
Drinking Water Conditioner

35900-13

Hygiene Replacement Media-
General Ionics Model 200,000
Bacteriostatic Whole House
Water Filter

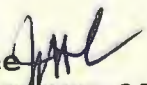
35900-18

It is understood that the label will be identical with that of the basic label accepted under this registration except for the product name.

The Agency does not review additional brand name labels.

If you have any questions concerning this letter, please contact Karen M. Leavy at (703)-557-3966.

Sincerely Yours,

John H. Lee 
Product Manager-31
Antimicrobial Branch
Registration Division H7505-C



United States Environmental Protection Agency
Office of Pesticide Programs (TS-767)
Washington, DC 20460

OPP Identifier Number

Application for Pesticide: ☐ Registration
☒ Amendment

Section I

1. Company/Product Number 35900-3 2. Date 12/4/90 3. Product Manager JOHN LEE 4. Proposed Classification ☒ General ☐ Restricted

5. Name and Address of Applicant (Include ZIP Code)

IONICS, INCORPORATED
P.O. BOX 99
3039 WASHINGTON PIKE
BRIDGEVILLE, PA 15017

☐ Check if this is a new address

6. Product Name

GENERAL IONICS MODEL IQ 0820 B BACTERIOSTATIC WATER CONDITIONER

Section II - Amendment Information

1. Subject ☐ Resubmission in response to Agency letter ☐ Final printed label in response to Agency letter ☒ Other (explain below) Date of Letter

ADDITIONAL BRAND NAMES:

HYGENE REPLACEMENT MEDIA - GENERAL IONICS BACTERIOSTATIC WATER CONDITIONER

Section III

1. Material This Product Will Be Packaged In 2. Type of Container

Child-Resistant Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No If "Yes," Unit package wgt No. per container	Water-Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No If "Yes," Package weight No. per container	<input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify)
---	---	--	--

3. Location of Net Contents Information ☐ Label ☐ Container 4. Size(s) of Retail Container

5. Location of Label Directions ☐ On Label ☐ On material accompanying product 6. Manner in Which Label is Affixed To Product
☐ Lithograph ☐ Other (Specify)
☐ Paper glued
☐ Stenciled

Section IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application).

Name

WALTER J. POLENS

Title

VICE PRESIDENT

Telephone No. (Include Area Code)

(412) 343-1040

6. Date Application Received (Stamped)

Certification
I certify that the statements I have made on this form and all attachments thereto are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

2. Signature

3. Title

VICE PRESIDENT

4. Typed Name

WALTER J. POLENS

5. Date Signed

12/4/90



United States Environmental Protection Agency
Office of Pesticide Programs (TS-767)
Washington, DC 20460

OPP Identifier Number

Application for Pesticide: ☐ Registration
☒ Amendment

Section I

1. Company/Product Number 35900-3
2. Date 12/4/90
3. Product Manager JOHN LEE
4. Proposed Classification ☒ General ☐ Restricted

5. Name and Address of Applicant (Include ZIP Code)

IONICS, INCORPORATED
P.O. BOX 99
3039 WASHINGTON PIKE
BRIDGEVILLE, PA 15017

☐ Check if this is a new address

6. Product Name

GENERAL IONICS MODEL IQ 0820 B BACTERIOSTATIC WATER CONDITIONER

Section II - Amendment Information

1. Subject
☐ Resubmission in response to Agency letter
☐ Final printed label in response to Agency letter
☒ Other (explain below) Date of Letter

ADDITIONAL BRAND NAMES:

HYGENE REPLACEMENT MEDIA - GENERAL IONICS BACTERIOSTATIC WATER CONDITIONER

Section III

1. Material This Product Will Be Packaged In
Child-Resistant Packaging ☐ Yes ☐ No
Unit Packaging ☐ Yes ☐ No
Water-Soluble Packaging ☐ Yes ☐ No
If "Yes,"
Unit package wgt No. per container
Package weight No. per container
2. Type of Container
☐ Metal
☐ Plastic
☐ Glass
☐ Paper
☐ Other (Specify)

3. Location of Net Contents Information ☐ Label ☐ Container
4. Size(s) of Retail Container

5. Location of Label Directions
☐ On Label
☐ On material accompanying product
6. Manner in Which Label is Affixed To Product
☐ Lithograph
☐ Paper glued
☐ Stenciled
☐ Other (Specify)

Section IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application).

Name

WALTER J. POLENS

Title

VICE PRESIDENT

Telephone No. (Include Area Code)

(412) 343-1040

6. Date Application Received (Stamped)

Certification
I certify that the statements I have made on this form and all attachments thereto are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

2. Signature

3. Title

VICE PRESIDENT

4. Typed Name

WALTER J. POLENS

5. Date Signed

12/4/90

Instructions

General

This form is to be used for all applications for new and amended registrations for pesticide products.

In order to process an application for new registration submitted on this form, the following material must accompany the application:

1. Offer to Pay Statement (EPA Form 8570-22, -23, or -24). (If not exempted by 40 CFR 162.9-1(b).)
2. Confidential Statement of Formula (EPA Form 8570-4).
3. Five copies of draft labeling.
4. Three copies of any data submitted.

Submission of Labeling - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8 1/2 x 11 inch paper or as a mockup of the proposed label. If prepared as a mockup it should be constructed in such a way as to facilitate storage in an 8 1/2 x 11 inch file. Mockup labels significantly smaller than 8 1/2 x 11 inches should be mounted on 8 1/2 x 11 inch paper for submission.

Submission of Data - Data submitted in support of this application must be submitted in three copies. In order to facilitate review, each type of data submitted must be bound separately, and clearly identified on the front cover including the date submitted.

A copy of the application form and a copy of the label should be bound in each separate volume of the data.

All Data For Which Claims of Confidentiality Are Asserted Must Be Submitted, Bound Separately and Clearly Marked As Such

Specific

Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Section I, III, and IV must be completed by the applicant. For applications submitted in connection with amended registration actions, Sections I, II, and IV must be completed by the applicant.

Block A - Check the appropriate action for which you are submitting this form.

Section I - This Section must be completed for both Registration and Amended Registration actions.

1. **Company/Product Number** - Insert your company number, if one has been assigned. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If application is for an amendment, insert the registration number of the product.
2. **Date** - Fill in the appropriate date.
3. **Product Manager** - If known, fill in the name and number of the Product Manager.
4. **Proposed Classification** - Specify the proposed classification for this product.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters.
As applicant, not residing in the United States must have an authorized agent residing in the United States to act for

EPA Form 8570-1 (Rev. 4-88) Reverse

them in all registration matters. The name and complete mailing address of such an agent must accompany this application.

6. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.

Amendment Information

Section II - This Section must be completed for all applications submitted in connection with Amended Registration.

1. **Subject of Amendment** - Check the appropriate block, and provide a brief explanation of the purpose(s) for the amendment, such as: "the addition of a site, pest, or crop"; "to change inert ingredient"; "general label revisions of precautionary statements," etc.

Packaging and Container Information

Section III - This Section must be completed for all applications submitted in connection with New Registration.

1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Specify the net contents of all retail containers for your product.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicate the method product labeling is attached to retail container.

Contact Point

Section IV - This Section must be completed for all Registration and Amended Registration applications.

- 1-5. Self-explanatory.
6. EPA Use Only.

Instructions

General

This form is to be used for all applications for new and amended registrations for pesticide products.

In order to process an application for new registration submitted on this form, the following material must accompany the application:

1. Offer to Pay Statement (EPA Form 8570-22, -23, or -24). (If not exempted by 40 CFR 162.9-1(b).)
2. Confidential Statement of Formula (EPA Form 8570-4).
3. Five copies of draft labeling.
4. Three copies of any data submitted.

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A copy of the application form and a copy of the label should be bound in each separate volume of the data.

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Specific

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Block A - Check the appropriate action for which you are submitting this form.

Section I - This Section must be completed for both Registration and Amended Registration actions.

1. **Company/Product Number** - Insert your company number, if one has been assigned. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If application is for an amendment, insert the registration number of the product.
2. **Date** - Fill in the appropriate date.
3. **Product Manager** - If known, fill in the name and number of the Product Manager.
4. **Proposed Classification** - Specify the proposed classification for this product.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters.
• An applicant not residing in the United States must have an authorized agent residing in the United States to act for

EPA Form 8570-1 (Rev. 4-88) Reverse

them in all registration matters. The name and complete mailing address of such an agent must accompany this application.

6. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.

Amendment Information

Section II - This Section must be completed for all applications submitted in connection with Amended Registration.

1. **Subject of Amendment** - Check the appropriate block, and provide a brief explanation of the purpose(s) for the amendment, such as: "the addition of a site, pest, or crop"; "to change inert ingredient"; "general label revisions of precautionary statements," etc.

Packaging and Container Information

Section III - This Section must be completed for all applications submitted in connection with New Registration.

1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Specify the net contents of all retail containers for your product.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicate the method product labeling is attached to retail container.

Contact Point

Section IV - This Section must be completed for all Registration and Amended Registration applications.

- 1-5. Self-explanatory.
6. EPA Use Only.



United States Environmental Protection Agency
Office of Pesticide Programs (TS-767)
Washington, DC 20460

Application for Pesticide: ☐ Registration
☒ Amendment

OPP Identifier Number

Section I

1. Company/Product Number 35900-3	2. Date 12/4/90	3. Product Manager JOHN LEE	4. Proposed Classification <input checked="" type="checkbox"/> General <input type="checkbox"/> Restricted
--------------------------------------	--------------------	--------------------------------	---

5. Name and Address of Applicant (Include ZIP Code)

IONICS, INCORPORATED
P.O. BOX 99
3039 WASHINGTON PIKE
BRIDGEVILLE, PA 15017

☐ Check if this is a new address

6. Product Name

GENERAL IONICS MODEL IQ 0820 B BACTERIOSTATIC WATER CONDITIONER

Section II - Amendment Information

1. Subject	Date of Letter
<input type="checkbox"/> Resubmission in response to Agency letter <input type="checkbox"/> Final printed label in response to Agency letter <input checked="" type="checkbox"/> Other (explain below)	

ADDITIONAL BRAND NAMES:

HYGENE REPLACEMENT MEDIA - GENERAL IONICS BACTERIOSTATIC WATER CONDITIONER

Section III

1. Material This Product Will Be Packaged In		2. Type of Container	
Child-Resistant Packaging	Unit Packaging	Water-Soluble Packaging	
<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Metal
	If "Yes,"	If "Yes,"	<input type="checkbox"/> Plastic
	Unit package wgt No. per container	Package weight No. per container	<input type="checkbox"/> Glass
			<input type="checkbox"/> Paper
			<input type="checkbox"/> Other (Specify)
3. Location of Net Contents Information		4. Size(s) of Retail Container	
<input type="checkbox"/> Label <input type="checkbox"/> Container			
5. Location of Label Directions		6. Manner in Which Label is Affixed To Product	
<input type="checkbox"/> On Label		<input type="checkbox"/> Lithograph	
<input type="checkbox"/> On material accompanying product		<input type="checkbox"/> Paper glued	
		<input type="checkbox"/> Stenciled	
		<input type="checkbox"/> Other (Specify)	

Section IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application).

Name

WALTER J. POLENS

Title

VICE PRESIDENT

Telephone No. (Include Area Code)

(412) 343-1040

6. Date Application Received (Stamped)

Certification
I certify that the statements I have made on this form and all attachments thereto are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

2. Signature

3. Title

VICE PRESIDENT

4. Typed Name

WALTER J. POLENS

5. Date Signed

12/4/90

Instructions

General

This form is to be used for all applications for new and amended registrations for pesticide products.

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Block A - Check the appropriate action for which you are submitting this form.

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1. **Company/Product Number** - Insert your company number, if one has been assigned. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If application is for an amendment, insert the registration number of the product.
2. **Date** - Fill in the appropriate date.
3. **Product Manager** - If known, fill in the name and number of the Product Manager.
4. **Proposed Classification** - Specify the proposed classification for this product.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters.
An applicant not residing in the United States must have an authorized agent residing in the United States to act for

EPA Form 8570-4 (Rev. 4-88) Reverse

them in all registration matters. The name and complete mailing address of such an agent must accompany this application.

6. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.

Amendment Information

Section II - This Section must be completed for all applications submitted in connection with Amended Registration.

1. **Subject of Amendment** - Check the appropriate block, and provide a brief explanation of the purpose(s) for the amendment, such as: "the addition of a site, pest, or crop"; "to change inert ingredient"; "general label revisions of precautionary statements," etc.

Packaging and Container Information

Section III - This Section must be completed for all applications submitted in connection with New Registration.

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4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicate the method product labeling is attached to retail container.

Contact Point

Section IV - This Section must be completed for all Registration and Amended Registration applications.

- 1-5. Self-explanatory.
6. EPA Use Only.

TO P.M. 31

DATE: 12/11/50

FROM: FEPS

revised 7/13/83

Record Number 128513

Reference Number 14

Input Date _____

CODING FORM FOR APPLICATIONS FOR REGISTRATION/AMENDMENTS

File Symbol/Reg.No. 35900-3 PM 31 ☒ Action Code 300

☒ Descriptor (Amend/Resubmissions only) _____

☒ Intrastate Call-in ☐ (Y) Yes ☒ Child-resistant/
Packaging ☐ (C) Certification
☒ (N) No ☐ (S) Service Person

☒ Registration Type: ☐ (R) Non-residential
Use Only

☐ (1) Conditional ☒ (2) Unconditional

☒ Proposed Classification: ☒ Final Classification: ☒ (N) Not Applicable

☐ (R) Restricted

☐ (R) Restricted

☒ (G) General

☐ (G) General ☒ (N) Not Classified

☒ Date on Application:

☒ EPA Received Date:

☒ Date Received by PM:

018 115 814
MO DAY YR

018 222 814
MO DAY YR

018 222 814
MO DAY YR

☒ Method of Support:

☒ Certification Statement:

☐ (1) Cite-All ☒ (4) Not Applicable ☐ (1) Yes ☒ (3) Not Applicable

☐ (2) Alternate ☐ (5) Not Submitted ☐ (2) Not Submitted

☐ (3) Combined ☐ (6) Owner Submission

Reviews Requested: ☐ (7) Total Submission

RD

PM

PL

CH

EF

DATE SENT	DUE DATE	DATE RETURNED

RESPONSE CODE	RESPONSE DATE
<u>35</u>	<u>9/16/84</u>

☒ Status: _____

☒ FINAL Response
ACTION: Code 35

☒ Response
Date

18 SEP 1984 4
MO DAY YR

75-DAY RESPONSE DUE DATE: ☐ (Y) Yes ☐ (N) No

Ionics, Incorporated
P.O. Box 99
3039 Washington Pike
Bridgeville, PA 15017

18 SEP 1984

Attention: Walter J. Polens,
Vice President

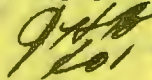
Gentlemen:

Subject: General Ionics Model IQ 1240B
Bacteriostatic Water Conditioner
EPA Registration No. 35900-9
General Ionics Model IQ 0820B
Bacteriostatic Water Conditioner
EPA Registration No. 35900-3 ✓

This is to acknowledge receipt of the Water Quality Association's
Voluntary Industry Standards S-100-81. These documents have been included in
the referenced product files.

This submission satisfactorily completes the requirements for acceptance
of the amended registration of these products.

Sincerely yours,



John H. Lee
Product Manager (31)
Disinfectants Branch
Registration Division (TS-767C)

RD/DIS:J.Lee:DCR-04958:0204L:efs:Raven:479-2013:09/12/84:Del.9/24/84

IONICS
IONICS, INCORPORATED

P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE A. C. 412 343-1040 TWX 5106973299

— August 15, 1984 —

Mr. John H. Lee, Product Manager (31)
U.S. Environmental Protection Agency
Disinfectants Branch
Registration Division (TS 767)
401 M Street S.W.
Washington, D.C. 20460

Subject: Your Letter Of August 3, 1984
General Ionics Model IQ 1240B Bacteriostatic
Water Conditioner - EPA Reg. No. 35900-9

General Ionics Model IQ 0820B Bacteriostatic
Water Conditioner - EPA Reg. No. 35900-3 ✓

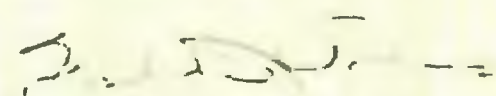
Dear Mr. Lee:

In accordance with the last paragraph of your subject letter, please find enclosed two (2) copies of the current Water Quality Association's Voluntary Industry Standards S-100-81 for inclusion in our EPA files.

We apologize for overlooking your earlier request for this document. If additional information is needed in this regard, please let us know.

Very truly yours,

IONICS, INCORPORATED
Bridgeville Plant


Walter J. Polens
Vice President

Enclosures
WJP/mlc

Voluntary Industry Standards

S-100-81

**FOR HOUSEHOLD
COMMERCIAL AND
PORTABLE EXCHANGE
WATER SOFTENERS**



WATER QUALITY ASSOCIATION

A not-for-profit international trade association representing firms and individuals engaged in the design, manufacture, production, distribution and sale of equipment, products, supplies and services for providing quality water for specific uses in residential, commercial, industrial and institutional establishments. Membership is voluntary.

One of the basic purposes of WQA is to promote the acceptance and use of industry equipment, products, and services. Activities, programs and services are designed to enable the industry to perform with the greatest economy and efficiency and to provide the greatest service to the public. The benefits of this shared experience accrue to all, and might otherwise be unobtainable.

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Lombard, Illinois**

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SIXTH REVISION S-100-75
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(Supersedes All Previous Revisions)

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S-100
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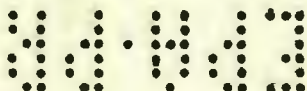


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VOLUNTARY INDUSTRY STANDARD FOR
HOUSEHOLD, COMMERCIAL AND PORTABLE
EXCHANGE WATER SOFTENERS

OBJECTIVE: *The objective of this standard is to provide a standard of hardness removal, capacity, performance, construction, sanitation and service for installed new Household, Commercial and Portable exchange water softeners.*

I. CLASSIFICATION AND DEFINITIONS

A. CLASSIFICATIONS

- 1. Household Water Softeners.** Household water softeners are connected to the water system with conventional plumbing fittings, are designed for intermittent household use at service flow rates of at least 4 but less than 16 U.S. gallons per minute, and are regenerated in place.
 - a. Manual**—All regeneration operations are performed manually. Direct salting regeneration—Dry salt is added directly into the ion exchanger tank after sufficient water is removed to make room for the salt. Termination of the rinsing process may be automatic, but return to service, and bypass of hard water, where desired, are controlled manually.
 - b. Semi-Automatic**—Direct salting regeneration. All operations are performed manually, including bypass of hard water where desired, except termination of rinse and return to service, which are performed automatically.
 - c. Automatic**—All operations, including bypass of hard water and return to service, are performed automatically after manual initiation. Dry salt or brine may be used for regeneration.
 - d. Fully Automatic**—All operations, including bypass (of hard or soft water depending upon design) and return to service are initiated and performed automatically. Salt storage is sufficient for multiple regenerations.
 - e. Demand Initiated Regeneration (DIR)**—All operations, including bypass (of hard or soft water depending on design) and return to service are initiated and performed automatically in response to the demand for treated water. Salt storage shall be sufficient for multiple regenerations.
- 2. Commercial Water Softeners.** Commercial water softeners are connected to the water system with conventional plumbing fittings, are designed for commercial or light industrial use at service flow rates up to 250 U.S. gallons per minute, and are regenerated in place.
 - a. Manual**—All regeneration operations are performed manually.
 - b. Semi-Automatic**—All regeneration operations are performed manually except termination of rinse and return to service which are performed automatically.
 - c. Automatic**—All regeneration operations are initiated and performed automatically, including return to service.
 - d. Demand Initiated Regeneration (DIR)**—All operations, including bypass (of hard or soft water depending on design) and return to service are initiated and performed automatically in response to the demand for treated water. Salt storage shall be sufficient for multiple regenerations.



3. **Portable Exchange Water Softeners.** Portable exchange water softeners are connected to the water system with special fittings designed for easy connection and disconnection. These softeners do not include the valving or controls required for regeneration, and are disconnected and transported to a central station or plant for regeneration. Portable exchange water softeners are designed for service flow rates of at least 4.0 U.S. gallons per minute.

B. DEFINITIONS

1. **Brine**—A solution of sodium chloride (salt) used for regenerating water softeners.
2. **Bypass**—A connection or a valve system that allows hard water to flow to the water system while the water softener is being regenerated or serviced in any manner.
3. **Calcium**—One of the principal elements making up the earth's crust, the compounds of which when dissolved in water make the water hard. The presence of calcium in water is a factor contributing to the formation of scale and insoluble soap curds which are means of clearly identifying hard water.
4. **Calcium carbonate**—A common basis for expressing the concentration of hardness and other salts in chemically equivalent terms.
5. **Cation exchange**—In water softening is principally the exchange of calcium and magnesium ions in water for sodium ions on an insoluble ion exchange material. Ferrous iron and other metals such as manganese and aluminum are sometimes present in small quantities. These metals are also exchanged, but they may precipitate and foul the exchanger bed.
6. **Collectors**—A term used to identify a system designed to collect backwash water from the surface of ion exchange beds.
7. **Color throw**—The imparting of color by any part of a water softener to the effluent during any stage of the operating cycle.
8. **Corrosion**—The destructive disintegration of metals by electro-chemical means.
9. **Cubic feet**—The volumetric unit used for measuring ion exchange materials. Volume is measured on an in-place, backwashed, drained and settled condition.
10. **Distributors**—Devices located at the top or bottom of a water softener to distribute or collect the water and to retain the cation exchange material in the unit.
11. **Downflow**—A term applied to designate the direction (down) in which water flows through the ion exchanger during any phase of the operating cycle of a water softener.
12. **Drain**—A line used to carry backwash water, spent regenerant and rinse water to the waste system.
13. **Effluent**—The water of solution which emerges from a water softener during any phase of the operating cycle.
14. **Filter**—A device installed in a water system through which water flows for the removal of turbidity, taste, color or odor.
15. **Flow rate**—The quantity of water and/or brine flowing measured in gallons per minute (gpm).
16. **Grains per gallon (gpg)**—A common basis of reporting water analysis in the United States and Canada. One grain per U.S. gallon equals 17.1 milligrams per liter or 17.1 parts per million (ppm). One grain per Imperial gallon equals 14.3 milligrams per liter or 14.3 parts per million (ppm). One grain is 1/7000 pounds or .0647 grams.

17. **Hardness**—Dissolved calcium and magnesium salts in water. Compounds of these two elements are responsible for most scaling in pipes and water heaters, and cause numerous problems in laundry, kitchen and bath. Hardness is usually expressed in grains per gallon or parts per million as calcium carbonate equivalent.
18. **Hardness leakage**—Calcium and magnesium present in water after passing through a water softener.
19. **Hard water**—Water containing calcium and magnesium salts in concentration of 1 grain per gallon or more (as calcium carbonate equivalent).
20. **Installation**—The piping or valving by which water softeners are connected into the water supply system, including a drain pipe.
21. **Ion exchange**—A process whereby an exchange material contains labile ions that will exchange with other ions in a surrounding solution.
22. **Ion exchanger**—An insoluble material containing labile ions that will exchange reversibly with other ions in a surrounding solution.
23. **Iron**—Iron is an element often present in the ground waters in a soluble form (such as ferrous bicarbonate) in quantities usually ranging from 0 to 10 parts per million. Iron in water is objectionable because of severe staining.
24. **Magnesium**—One of the elements making up the earth's crust, the compounds of which when dissolved in water make the water hard. The presence of magnesium in water is a factor contributing to the formation of scale, and insoluble soap curds which are means of clearly identifying hard water.
25. **Parts per million (ppm)**—A common basis of reporting water analysis in the United States and Canada. One part per million (ppm) equals 1 pound per million pounds of water, 17.1 ppm equals one grain per U.S. gallon, 14.3 ppm equals one grain per Imperial gallon.
26. **pH value**—A number denoting alkalinity or acidity. Numbers below 7.0 indicate acidity, which increases as the number becomes smaller. Numbers above 7.0 indicate alkalinity, which increases as the number becomes larger. The pH scale runs from 0 to 14, 7.0 being the neutral point.
27. **Pressure drop**—A decrease of water pressure measured in pounds per square inch (psi).
28. **Rated service flow**—The manufacturer's specified maximum flow at which the softener will deliver soft water.
29. **Rated softening capacity**—Softener capacity rating shall be based on grains of hardness removed (as calcium carbonate) while producing soft water between successive regenerations and must be related to pounds of salt required for each regeneration.
30. **Regeneration**—In general includes the backwash, brine and fresh water rinse steps, necessary to prepare the exchanger bed for service after exhaustion. Specifically, the term may be applied to the "brine" step in which a sodium chloride solution is passed thru the exchanger bed. The sodium ions displace the hardness ions from the exchanger to permit the hardness to be rinsed to drain.
31. **Resin**—The term used to designate a synthetic organic ion exchange material such as high capacity cation exchange resin widely used in water softeners.
32. **Rinse**—That part of the regenerating cycle of a water softener where fresh water is introduced to remove spent regenerant and excess salt prior to placing the softener into service.
33. **Salt**—High purity sodium chloride of a granular, rock or briquetted type used for generating a water softener.
34. **Service run**—That part of the operating cycle of a water softener in which the hard water supply is passed through a regenerated and rinsed bed of ion exchange material, thereby producing soft water.

35. **Shielded (insulated)**—The separation of metallic parts by a non-conductor.
36. **Siliceous gel**—A manufactured granular hydrated sodium aluminosilicate often called synthetic gel zeolite, used in water softeners.
37. **Soft water**—Water containing less than 1 grain per gallon dissolved calcium and magnesium salts (as calcium carbonate equivalent).
38. **Turbidity**—The term used to define any undissolved materials in water such as finely divided particles of sand, clay, etc.
39. **Upflow**—A term applied to designate the direction (up) in which water flows through the ion exchange bed during any phase of the operating cycle.
40. **Validation**—Determination by WQA that a prototype of the model validated has met the minimum performance requirements of this Standard, the manufacturer's performance ratings, and the requirements of non-toxicity of this Standard. All tests of performance standards and manufacturer's performance ratings shall be made pursuant to Section VI of this Standard. Certification by the National Sanitation Foundation that materials in contact with water meet NSF Standard 43 and 44 shall be sufficient evidence of compliance with the non-toxicity requirements of this Standard.

II. PERFORMANCE STANDARDS

- A. **QUALITY OF SOFT WATER.** When operated in accordance with the manufacturer's instructions, a water softener shall deliver water at its specified service flow rate(s) having less than 1.0 grain hardness (as calcium carbonate) per U.S. gallon when influent water contains not more than 20 grains per gallon of hardness (as calcium carbonate) and not more than 5.0 gpg of sodium salts (as calcium carbonate).
- B. **CAPACITY RATINGS.** Each softener capacity rating shall be based on the grains of hardness (as calcium carbonate) removed while producing soft water between successive regenerations of a single ion exchanger tank. Capacity ratings for multiple tank systems shall be based on a single tank, but the total capacity of the system increased in proportion to the number of ion exchanger tanks in the system.
 1. Capacity ratings for household and commercial softeners shall be related to the pounds of salt required for regeneration.
 2. Manufacturer's capacity ratings for portable exchange softeners, where established, shall be based upon the standard regeneration procedures and salt dosages specified by the manufacturer.
 3. Brine measuring systems used with brine tank softeners shall deliver the amount of salt specified by the manufacturer for the maximum validated capacity rating, $\pm 10\%$.
- C. **SOFTENER FLOW RATINGS.** All softener flow ratings shall be based on a single ion exchanger tank. In a multiple tank system, the total flow available from the system may or may not be increased in proportion to the number of tanks, depending upon the application and mode of regeneration or exchange.
 1. **Household Water Softeners.** A household water softener shall have a Service Flow Rating of not less than 4.0 U.S. gpm, and shall deliver soft water at its Service Flow Rating for a period of not less than 10 minutes. A household water softener shall deliver soft water and its full capacity rating at a continuous flow of one-half its Service Flow Rating.
 2. **Commercial Water Softeners.** A commercial water softener shall deliver soft water at its Peak Service Flow Rating for a period of not less than 10

minutes, and soft water and its full capacity rating with continuous flow at its continuous Operating Flow Rating.

3. **Portable Exchange Water Softeners.** A portable exchange water softener shall have a Service Flow Rating of not less than 4.0 U.S. gpm, and shall deliver soft water at its Service Flow Rating for a period of not less than 10 minutes. A portable exchange water softener shall deliver soft water and full capacity rating with continuous flow at one-half its Service Flow Rating.

D. **PRESSURE DROP.** Softener pressure drop is defined at the pressure drop from inlet to outlet of the softener including valving and ion exchanger.

1. **Household Water Softeners.** The pressure drop of a household water softener shall not exceed 15.0 psi at the Service Flow Rating on water at 60° F.
2. **Commercial Water Softeners.** The pressure drop of a commercial water softener on 60° F. water shall be given for the Continuous Operating Flow Rating and the Peak Service Flow Rating.
3. **Portable Exchange Water Softeners.** The pressure drop of a portable exchange water softener shall not exceed 15.0 psi at the Service Flow Rating on water at 60° F.

III. MATERIALS AND CONSTRUCTION STANDARDS

A. GENERAL MATERIAL REQUIREMENTS

1. Materials shall be selected for their strength and resistance to corrosion by water and brine; shall be free of objectionable color throw, taste and odor; shall not impart toxic substances to the water.
2. Water softeners shall be designed and constructed so that when installed in accordance with the manufacturer's instructions they will meet established public health and safety requirements. Certification by a qualified testing laboratory that a water softener meets the requirements of NSF Standard 44 or equal shall be sufficient evidence of compliance with this sub-section. Brine tanks, brine tank components, and connecting tubing are specifically exempted from the requirements of NSF Standard 44.
3. All non-metallic interior coatings or linings shall meet the requirements for plastic materials in NSF Standard 44. All non-metallic components shall be constructed for a working temperature of at least 100° F. Unless exposed non-metallic components are capable of resisting, or are formulated to resist, deterioration due to sunlight, the manufacturer shall warn the installer and user against exposed installations with a label or tag attached to the unit.

B. TANKS

1. Tanks may be constructed of mild steels when the interior is protected by a lining or coating such as hot dip galvanizing, ceramic or rubber lining. Unprotected mild steels may be used for the larger commercial softeners where interior protection may not be practical. Minimum wall thickness will be determined to meet the performance specifications of Section III.D. of this Standard.
2. Galvanized tanks shall contain not less than 1.5 ounces of zinc per square foot. If the internal coating or protective mechanism is not suitable for protecting the exterior of the tank, a suitable external protective means such as hot dip galvanizing, porcelain enamel, or organic finish shall be used.

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3. Tanks, other than mild steel, shall be suitably corrosion resistant as to types of material and/or protective mechanism. Suitable types of materials include corrosion resistant, or non-corrosive materials such as high nickel alloys, stainless steel, and plastic.
4. Brine or other accessory tanks shall be of durable construction and shall be provided with adequate covers. Covers shall be capable of gripping in place to provide protection against outside contaminants.

C. VALVES, PIPING, SCREENS & ELECTRICAL COMPONENTS

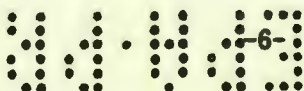
1. Valves, piping, distributors and collectors shall be constructed of suitable corrosion-resistant materials, and dissimilar metals shall be insulated or shielded in accordance with good engineering practice.
2. Electrical and/or hydraulic operating controls shall be of sturdy construction with durable valves and timing mechanisms. They shall be designed to prevent admittance of salt water into the water system when the manufacturer's instructions are followed.
 - a. All electrical components shall be "approved" as defined in the 1968 National Electrical Code (published by the National Fire Protection Association).
 - b. Electrical control devices which use Class I Systems, as defined in the National Electrical Code, shall be capable of withstanding the standard dielectric strength test of 1,000 volts plus twice the maximum rated voltage for a period of one minute.
 - c. Flexible cords used to supply electrical power to Class I clocks and/or control valves shall be of adequate size for the load but in no case smaller than AWG size 18 wire, shall incorporate a conductor for grounding purposes, and shall use an acceptable strain relief fitting at the case to prevent pull or strain on terminals or joints. The strain relief shall meet a test pull of 20 pounds.

D. WORKING PRESSURES AND HYDROSTATIC TESTS

1. **Household and Portable Exchange Water Softeners.** All components subject to line pressure shall be constructed for a working pressure of at least 125 psig and the following hydrostatic requirements when tested in accordance with Section VI:
 - a. Complete softener assemblies shall be watertight throughout a hydrostatic test pressure of 2.4 times the working pressure (300 psi minimum) for a period of 15 minutes.
 - b. Metallic pressure tanks shall be watertight throughout a hydrostatic test pressure of 2.4 times the working pressure (300 psi minimum) for a period of 15 minutes without excessive permanent distortion, defined as an increase in tank circumference more than 0.2 percent of the original circumference, or top or bottom head deflection more than 0.5 percent of the tank diameter.
 - c. Non-metallic pressure tanks shall have a burst pressure of at least 4 times the working pressure (500 psi minimum), and shall be watertight at 150 psi after a minimum of 100,000 pressure cycles of 0 to 150 psi.

Approval of a non-metallic tank under this or an equal specification by a recognized testing agency shall be considered to be acceptable evidence of compliance with this section. Such approval shall be by a recognized approval seal or by letter of certification from a recognized testing agency...

- d. Valves, both control and brine valves subject to line pressure, shall be watertight at 150 psi after a minimum of 100,000 pressure cycles of 0 to 150 psi.



2. **Commercial Water Softeners.** All components subject to line pressure shall be constructed for a working pressure of at least 100 psig and the following hydrostatic requirements when tested in accordance with Section VI:
 - a. Complete softener assemblies shall be watertight throughout a hydrostatic test pressure of 1.5 times the working pressure (150 psi minimum) for a period of 15 minutes.
 - b. Metallic pressure tanks shall be watertight throughout a hydrostatic test pressure of 1.5 times the working pressure (150 psi minimum) for a period of 15 minutes without excessive permanent distortion, defined as an increase in tank circumference more than 0.2 percent of the original circumference, or top or bottom head deflection more than 0.5 percent of the tank diameter.
 - c. Non-metallic pressure tanks shall have a burst pressure of at least 4 times the working pressure (400 psi minimum).

E. ION EXCHANGERS

1. Ion exchanger materials shall be free from objectionable color throw, taste, odor, and shall not impart toxic substances to the water.
2. Ion exchange resins shall meet the requirements contained in the Food Additives Amendment to the Food, Drug, and Cosmetic Act, Subpart D, Section 121.1148 as amended February, 1968 (33 F.R.2845).

IV. INSTRUCTION AND INFORMATION REQUIREMENTS

- A. **INSTALLATION INSTRUCTIONS.** The equipment manufacturer shall provide adequate installation instructions, including arrangement of plumbing connections, electrical wiring where applicable, disinfection procedures and other requirements of this Standard, with details relating to the specific softener model.
- B. **OPERATING PRESSURE.** The manufacturer may specify the maximum pressure at which a permanently installed softener may be operated. He may also require the use of a pressure reducing valve ahead of the softener to prevent operation at pressure in excess of his recommendations, but shall warn installers of the flow reducing effects of such pressure reducing valves.
- C. **INFORMATION AND LABELING REQUIREMENTS**
 1. The manufacturer of household and commercial water softeners shall furnish the following data with the softener for the user:
 - a. Softening capacity rating(s). At least one rating shall be stated for a softener with a fixed salt level, and three ratings or a capacity vs. salt curve for a softener with adjustable salt level.
 - b. The type, grade and amount of salt in pounds required to obtain the softening capacity rating(s) with each regeneration. At least one alternate type and/or grade of salt, described in generic terms, shall be given.
 - c. Service flow rating(s) in gpm.
 - d. Pressure drop in psi at service flow rating(s).*

*Pressure drop data as required in this section may be expressed in the following manner: "The pressure drop does not exceed 15.0 psi at the service flow rate of _____ U.S. gpm."



- e. Maximum flow rate to drain during regeneration cycle. (For drain line sizing.)
 - f. Detailed operation, regeneration and maintenance instructions.
 - g. Type of conditioning material used, and quantity in cubic feet.
 - h. Maximum working and/or operating pressure, in psig.
 - i. Maximum operating temperature in degrees Fahrenheit (F°).
2. Each household or commercial water softener shall bear a permanent label or labels showing the manufacturer's name and address, the model number, serial number if assigned, the service flow rating(s), the pressure drop in psi at the service flow rating(s),* the recommended type and/or grade of salt, and the name or mark of the approved validating agency.
 3. The manufacturer of portable exchange water softeners shall furnish the following data with the softener for the user:
 - a. Service flow rating in gpm.
 - b. Pressure drop in psi at service flow rating.*
 - c. Maximum working and/or operating pressure in psig.
 - d. Maximum operating temperature in degrees Fahrenheit (F°).
 - e. The name or mark of the approved validating agency.

V. MANUFACTURER'S SALES LITERATURE AND SPECIFICATIONS

1. Published capacity ratings.
 - a. Sales literature and specifications shall show only validated capacity ratings, as defined in this Standard.
 - b. All published capacity ratings shall be related to the validated pounds of salt required for each regeneration.
2. Published service flow rates and pressure drops.
 - a. Sales literature and specifications shall show only validated service flow ratings, as defined in this Standard.
 - b. All published service flow ratings shall be related to the validated pressure drops at those flow ratings.

VI. VALIDATION OF PERFORMANCE RATINGS

A. HOUSEHOLD WATER SOFTENERS

1. Validation by Test; Standard Minimum Series. The following measurements and performance ratings shall be verified by actual tests by the Water Quality Association or other approved testing agency on at least one size of each model:
 - a. Rated capacity at three approximately equally spaced salt levels. The results of these tests shall be graphed to establish ratings at intermediate levels, but the curves shall not be extrapolated beyond the test limits.
 - b. Salt delivered by the brine system, at one of the salt levels as specified by the manufacturer.
 - c. Peak Service Flow.

*Pressure drop data as required in this section may be expressed in the following manner: "The pressure drop does not exceed 15.0 psi at the service flow rate of U.S. gpm."



- d. Pressure Drop Curves.
 - e. Hydrostatic Test.
 - f. Thickness of galvanizing or other coating, where applicable.
 - g. Dielectric strength, where applicable.
 - h. Ion exchanger, where applicable.
 - i. 0 to 150 psig cycle tests, where applicable.
2. Validation by Calculation may be used to extend test results to other sizes of the same model. Water softeners may be considered the same model when they are identical in valving, internal design and construction, types of ion exchanger, and operation, and vary only in amount of ion exchanger and tank size, provided:
- a. The same type of salt is used.
 - b. The softener tank cross section area is not more than 200% or less than 50% of the tested softener tank.
 - c. The ion exchanger bed depth is not less than 75% of the bed depth of the tested softener.
 - d. The Service Flow Rate in gpm per square foot of bed cross section area is not more than 120% of the Service Flow Rate of the tested softener.
 - e. The backwash flow rate in gpm per square foot of bed cross section area is not less than 80% of the flow rate of the tested softener.
 - f. The rinse flow in gpm per square foot of bed cross section area is not more than 120% of the tested softener.
 - g. The capacity per cubic foot of ion exchanger at the same salt level per cubic foot is not increased.
 - h. The salt level in pounds of salt per Kilograin of capacity is not decreased.
3. Validation by Calculation procedures: The specifications of the softener to be Validated by Calculation shall be checked for conformance with the tolerances of Section 2, above, and capacity and pressure drop ratings determined.
- a. Calculate the three capacity ratings at the same salt levels per cubic foot of ion exchanger used for the tested softener by applying the following equation at each salt level:

$$\frac{V_c}{V_b} \times C_b = C_c \quad \text{in which}$$

B_c is the volume of ion exchanger in the calculated softener, V_b is the volume of ion exchanger in the tested softener, C_b is the capacity of the tested softener at the same salt level, C_c is the capacity of the calculated softener. The results of these calculations shall be graphed to established ratings at intermediate levels, but the curve shall not be extrapolated.

- b. Determine the pressure drop of the calculated softener by first plotting the corrected ion exchanger pressure drops of the tested softener against flow rates in gpm per square foot on log-log graph paper. Express the increments of flow rate of the calculated softener in gpm per square foot and read the corresponding pressure drops from the graph. Correct these pressure drop values for variation in bed depth by applying the following equation:

$$P_e \times \frac{B_c}{B_b} \quad \text{in which}$$

P_e is the pressure drop through the ion exchanger of the calculated softener.

P_g is the pressure drop from the graph,
 B_c is the bed depth of the calculated softener, and
 B_b is the bed depth of the basic tested softener.

Then $P_e + P_t = P_c$ in which

P_t is the pressure drop of the empty tested softener, and P_c is the pressure drop of the filled calculated softener. Plot the calculated pressure drop values against each increment of flow rate in gpm on log-log graph paper, and determine the pressure drop at the Service Flow Rate.

- c. Hydrostatic and cycling tests may be required at the discretion of the Water Quality Association.

B. COMMERCIAL WATER SOFTENERS

1. Validation by Test; Standard Minimum Series. It is considered impractical to ship complete commercial water softeners to a central laboratory for verification of performance ratings by complete tests. Therefore the following inspections may be made, and performance ratings verified by tests witnessed by the Water Quality Association, or other approved testing agency, on at least one size of each model at the plant of the equipment manufacturer:
 - a. Pressure drop curve on empty softener.
 - b. Regeneration flow rates.
 - c. Hydrostatic test.
 - d. Thickness of galvanizing or other coating, where applicable.
 - e. Dielectric strength, where applicable.
 - f. Ion exchangers, where applicable.
 - g. 0 to 150 psig cycle tests, where applicable.
 - h. Calculation of capacity, pressure drop and service flow ratings, based on reliable data from the supplier of the ion exchanger or other source acceptable to the Water Quality Association.
2. Validation by Calculation may be used to extend test results and calculated ratings from Section B.1 above to other sizes of the same model, using the applicable restrictions and procedures of Sections A.2 and A.3 above.

C. PORTABLE EXCHANGE WATER SOFTENERS

1. Validation by Test; Standard Minimum Series. The following performance ratings shall be verified by actual tests by the Water Quality Association or other approved testing agency on at least one size of each model, using new or conditioned softeners as indicated:
 - a. Pressure drop curves. One on empty new tank, three on filled conditioned softeners.
 - b. Hydrostatic test on one new empty tank. This may be the same tank used for the empty pressure drop curve.
 - c. Thickness of galvanizing or other coating, where applicable. This may be the same tank used for the empty pressure drop curve.
 - d. Ion exchanger tests, where applicable.
 - e. 0 to 150 psi cycle tests, where applicable, on a new empty tank. This should not be the same tank used for the hydrostatic test.
2. Validation by Calculation may be used to extend test results to other sizes of the same model. Portable exchange water softeners may be considered the same model when they are identical in connectors, internal design and construction, and type of ion exchanger, and vary only in amount of ion exchanger and tank size, provided:



- a. The softener cross section area is not more than 200% or less than 50% of the tested softener tank.
 - b. The ion exchanger bed depth is not less than 75% of the bed depth of the tested softener.
 - c. The peak service flow rate in gpm per square foot of bed cross section area is not more than 120% of the peak service flow rate of the tested softener.
 - d. The capacity per cubic foot of ion exchanger is not increased.
3. Validation by Calculation may be used to extend test results to other sizes of the same model, using the applicable restrictions and procedures of Section A above.

D. ORDER OF TESTS

- 1. Where all tests are to be run on one softener, the order of tests shall be as follows:
 - a. Pressure drop curve of softener without ion exchanger, but with supporting bed, where used.
 - b. Ion exchanger tests, where applicable.
 - c. Capacity tests.
 - d. Service flow rating(s).
 - e. Pressure drop curve of softener with ion exchanger.
 - f. Hydrostatic test.
 - g. Brine system tests.
 - h. Measurement of thickness of galvanizing or coatings, where applicable.
 - i. Dielectric strength test, where applicable.
 - j. 0 to 150 psig cycle tests, where applicable.
- 2. Where total elapsed time or other factors must be considered, duplicate components or assemblies may be used to permit concurrent tests, as follows:
 - a. Extra ion exchanger may be tested concurrently with any of the above tests.
 - b. An extra brine valve, where the float type is provided, may be used to test brine measurement concurrently with any of the above tests.
 - c. An extra softener, complete except for ion exchanger, or individual plastic components as required, may be used for concurrent 0 to 150 psig cycle tests.
 - d. Thickness of galvanizing or coatings and the dielectric strength test may be concurrent with any of the above tests, provided the necessary components or assemblies are made available.

E. PRESSURE DROP

1. Apparatus.

- a. Manometer. Mercury Manometer, Merriam Model 20AA25WM, or equal. A 70" manometer will permit the measurement of up to approximately 30 psi differential pressure. Permanently mount the manometer in a plumb position.

Traps should be installed in the pressure lines to the manometer, to prevent water from reaching the mercury columns, and to catch the mercury if it is inadvertently blown from the manometer. The traps may be conveniently constructed from 2" pipe, approximately 24" long. Holes may be drilled and tapped in the caps and side walls for the drain and shutoff cocks and pressure lines to the mercury columns. Refer to schematic Figure A.



Connecting tubing may be 1/4" O.D. copper tubing, or of plastic tubing, with appropriate fittings.

Redistilled mercury, suitable for instrument use, must be used.

- b. Pressure tap assemblies. Pressure taps shall be installed in pipe nipples of the proper diameter to be directly connected to the inlet and outlet ports of the unit under test, without the use of reducers or bushings. Couplings are permitted in the case of male inlet or outlet threads.

The outlet nipple shall be of sufficient length to permit installation in the test unit without interference with the inlet nipple, when inlet and outlet ports are on minimum centers.

The pressure taps shall be located not less than three times the nominal inside diameter (3 X D) of the pipe nipple from either end of the nipple. See schematic Figure C.

The pressure taps shall be by use of fittings or adaptors fastened to the pipe in such a way that the fittings does not extend beyond the inner wall of pipe. See schematic Figure B.

The size of the pressure tap hole through the pipe wall shall not exceed the dimensions given below:

Nominal Inside Pipe Diameter d"	Maximum Pressure Hole Diameter d"
less than 1-1/2"	1/8"
1-1/2" or more	1/4"

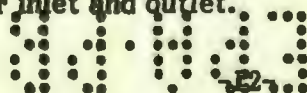
The length of the pressure hole measured from the inner surface of the pipe shall be not less than three times the diameter of the pressure hole (3 X d). See schematic Figure B.

There shall be no burrs, wire edges, or other irregularities on the inside of the pipe at the pressure connections or along the edge of the hole through the pipe wall.

- c. Flow meter. Shall be a direct reading flow meter of the type manufactured by Fischer & Porter and Brooks Rotameter Company, with an accuracy of plus or minus 2% of full flow, or equal. An orifice plate flow meter of equal accuracy may be used if desired. A range of 2 to 20 gpm will cover tests for household and portable exchange softeners, but tests on commercial softeners will require higher capacities.

Install the flow meter in a permanent plumb position in accordance with the instructions of the manufacturer. Avoid the excessive use of reducers and bushings.

- d. Pressure gauge. Install a pressure gauge in the outlet of the flow meter. The pressure of the test water line must be at least 30 psi at full test flow.
- e. Thermometer. A Fahrenheit thermometer suitable for installation in the water line is recommended. Alternately, a glass portable thermometer may be used to check the temperature of the test water. Graduations shall not be more than 2° F. apart.
- f. Connecting hoses. Connecting hoses may be used for the water supply to the test unit, and for the outlet line to the drain. The hose should have an I.D. of at least 1", and in no case should be smaller than the softener inlet and outlet.



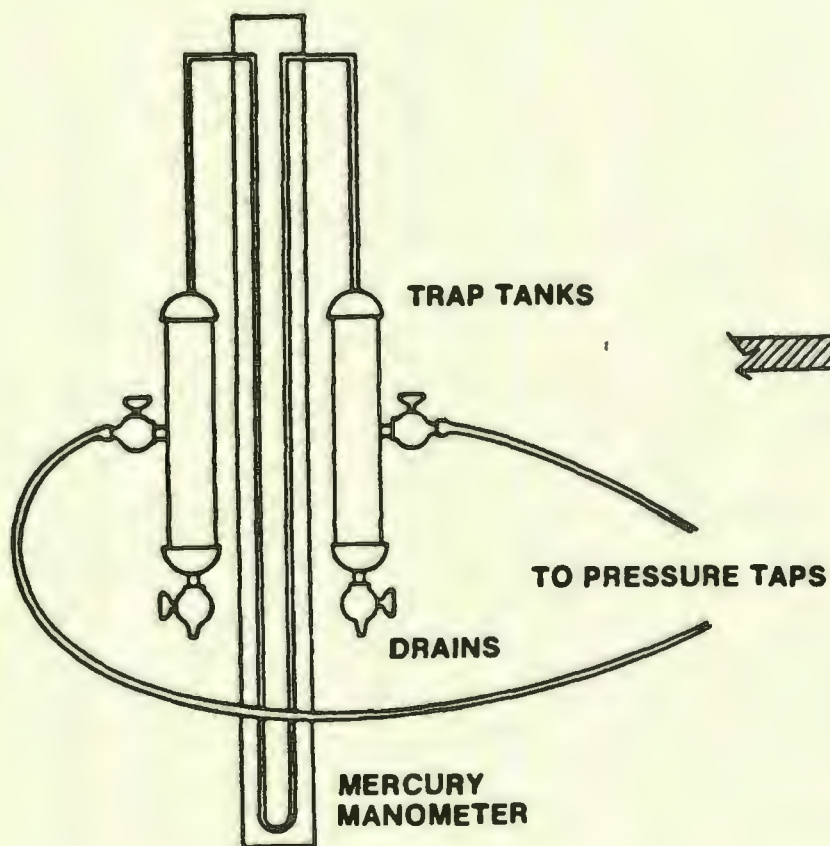


Fig. A

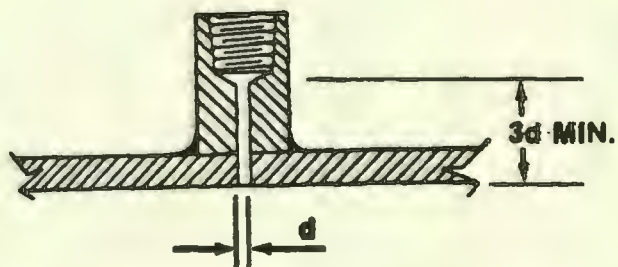


Fig. B

NOTE: EDGE OF HOLE MUST BE CLEAN AND SHARP OR SLIGHTLY ROUNDED. FREE FROM BURPS, WIRE EDGES OR OTHER IRREGULARITIES.

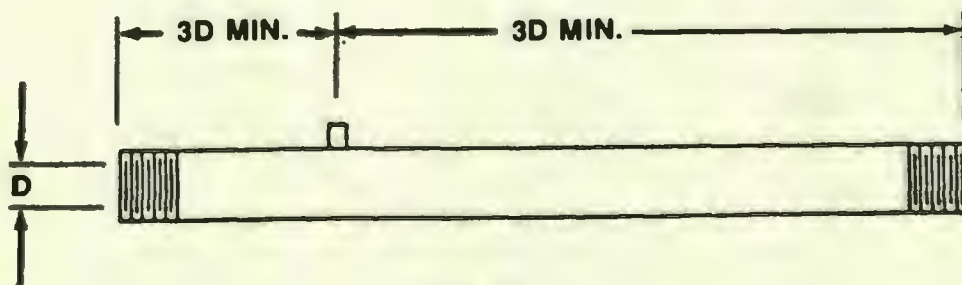


Fig. C

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- g. General assembly of apparatus.** The specific components listed above plus necessary incidental fittings shall be assembled in the following sequence:

Inlet water line	Inlet pressure tap assembly
Inlet valve	Unit under test
Thermometer	Outlet pressure tap assembly
Flow meter	Throttling valve
Pressure gauge	Hose to drain
Connecting hose	

Install the connecting tubing between the manometer traps and the pressure taps.

(NOTE: At no time shall brass or copper be used where it may be in contact with the mercury, as amalgamation may result.)

2. Test procedure.

- a. With the test unit installed as in 1.g., close the manometer drain and shutoff cocks. Open the throttling valve and slowly open the inlet valve to fill the test unit with water. Flush the system thoroughly to eliminate air pockets. Close the outlet valve.
- b. If the test unit is a water softener containing ion exchange material, regenerate the unit in place. Avoid jarring or other disturbance. Then place the softener valving in the service position.
- c. Open the manometer shutoff cocks simultaneously to apply pressure to both legs of the manometer. Allow the two manometer mercury columns to reach equilibrium.
- d. Adjust the position of the manometer scale to bring both the mercury columns to the zero position, if possible. If not possible, record the initial column readings at zero flow.
- e. With the throttling valve, adjust the flow through the test unit in increments of approximately 2 gpm for household softener tests. Other increments may be used if desirable for special investigations or other types of units. A minimum of four readings is necessary, and five or more is recommended. Record the mercury levels of both columns to the closest 0.1 inch, at each increment of flow.
- f. Readings shall be continued until the rated service flow is exceeded by at least 2 gpm. Readings may be further continued until the maximum of the flow meter has been reached, or the mercury in the manometer has reached an unsafe level.
- g. At the conclusion of the test, slowly close the inlet valve. When the pressure in the system has dropped to zero, open the manometer trap drain cocks and disconnect the test unit.

3. Calculation of results.

- a. Add the mercury level readings of the left and right columns to determine the total mercury differential at each flow rate. Subtract the sum of the initial mercury readings at zero flow from each total.
- b. Multiply each total mercury differential by 0.489 to convert from inches of mercury to pounds per square inch.
- c. As the viscosity of water affects the pressure drop through a bed of ion exchanger, and the viscosity changes with water temperature, it is necessary to make a correction of the observed pressure drop of a softener containing the ion exchanger.

To express the pressure drop at the standard temperature of 60°F., apply the following equation to the observed differential in psi at each increment of flow:

$$P_b = P_t + F (P_f - P_t) \quad \text{in which}$$

P_b is the pressure drop of the tested softener, corrected to 60°F.,
 P_t is the pressure drop of the empty softener at the same flow rate,
 P_f is the observed pressure drop at the softener containing the ion exchanger at the same flow rate, and
 F is the correction factor from the following table.

Test Water Temperature F°	Correction Factor	Test Water Temperature F°	Correction Factor
46	0.81	66	1.09
47	0.82	67	1.10
48	0.83	68	1.12
49	0.85	69	1.13
50	0.86	70	1.15
51	0.87	71	1.16
52	0.89	72	1.18
53	0.90	73	1.19
54	0.91	74	1.21
55	0.93	75	1.22
56	0.94	76	1.24
57	0.96	77	1.26
58	0.97	78	1.27
59	0.99	79	1.29
60	1.00	80	1.31
61	1.01	81	1.32
62	1.03	82	1.34
63	1.04	83	1.35
64	1.06	84	1.37
65	1.07	85	1.38

F. ION EXCHANGE RESIN TESTS

Where required, these tests shall be conducted on unused resin in accordance with the procedures given in the current Food Additives Amendment to the Food, Drug and Cosmetic Act, Subpart D, Section 121.1148. A copy of this Section, current at the time of printing, is given in Appendix III.

G. RATED CAPACITY TEST METHOD

1. Test apparatus and arrangement. See Figure D.

- Softener shall be connected to the water supply in accordance with manufacturer's standard installation instructions.
- A water flow meter shall be placed in the inlet line to the softener to measure flow rate in gallons per minute.
- A totalizing type water meter shall be placed in the outlet line from the water softener to measure volume of water softened.

- d. A pressure regulator and a suitable pressure gauge shall be placed in the inlet line to the water softener for controlling water pressure.
- e. A sampling cock or equivalent device shall be provided in the inlet line for sampling the hard water.
- f. A valve shall be provided in the outlet line for controlling the service flow rate.

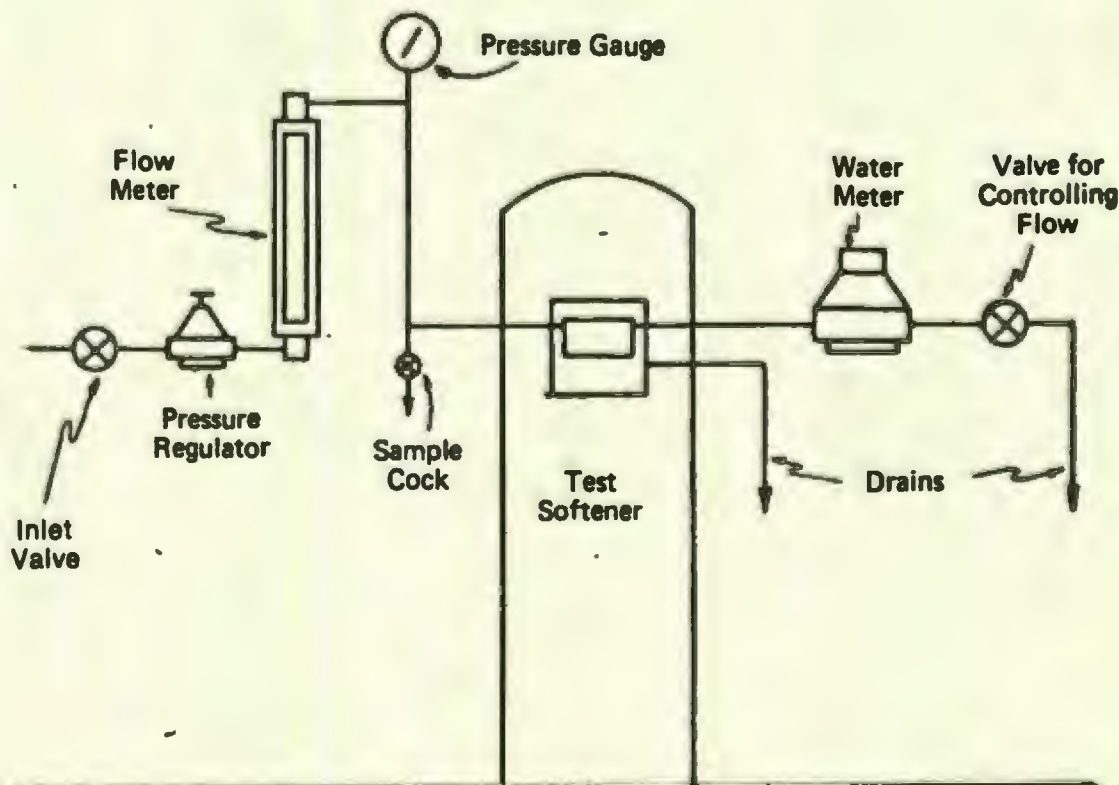


Fig. D

2. Test water. Water used for test runs shall have a hardness (as calcium carbonate) of between 15 and 20 gpg, not more than 5.0 gpg sodium salts (as calcium carbonate) not more than 0.1 mg/l total iron, pH in the range of 6.9 to 9.5, water temperature shall be between 55°F. and 75°F., and water pressure shall be in the range of 30 to 40 psig.

(Softeners designated for operation in waters of lower hardness may be tested using such waters.)

If unavailable in natural form, it shall be prepared to this specification in the ratio 2/3 calcium and 1/3 magnesium. To increase the calcium hardness 2/3 grain per gallon, add 63.5 grams of $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$ per 1000 gallons of

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water. To increase the magnesium hardness by 1/3 grain per gallon, add 53.2 grams of $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$ per 1000 gallons of water.

To determine the hardness of the influent water, a constant percentage of influent water shall be collected during the test run and the composite sample tested for hardness by accepted water hardness test methods. The procedure for hardness testing described in "Standard Methods for the Examination of Water and Wastewater" current edition, is recommended.

3. Test procedure.

- a. Set water pressure regulator to maintain a pressure at from 30 to 40 psi during the test.
- b. Establish the salt dosage and regenerate the softener in accordance with the manufacturer's instructions, with the exceptions noted in Section 4.
- c. Record initial water meter reading.
- d. Establish softener service flow rate at 50% of manufacturer's rated service flow.
- e. Softening capacity runs shall be at constant rate of flow.
- f. Determine completion of rinse by making an initial effluent soft water quality test to establish that water has less than 1 grain per gallon hardness (as calcium carbonate). This should be based on testing a sample of the fourth gallon of soft water produced for each cubic foot of ion exchange mineral in the water.
- g. Collect and test the hardness of the effluent from the softener at such intervals as required to accurately determine the capacity. With softener valves in softening position, water delivered at outlet shall be tested by accepted water hardness test methods with 1 grain per gallon hardness as the determining end point.

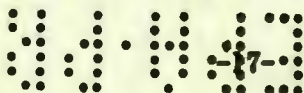
4. Brine systems for capacity tests.

- a. Salt in head softeners—Accurately weigh out the specified amount of the type of salt recommended by the manufacturer, and add to the softener according to the manufacturer's instructions.
- b. Open brine tank softeners—Install the brine valve supplied with the softener in a suitable open container. Connect the brine line to the softener as in a normal installation. Add saturated brine (prepared separately) to the open container until the point of minimum draw is reached. For each regeneration, measure the proper volume of saturated brine into the open container. (Note: 1 gallon of saturated brine contains 2.647 pounds of salt).

During the regeneration, the saturated brine will be educted into the softener. If a float type brine valve is used, the float should be lifted manually when the education of brine is complete, to prevent the return of fresh water into the container. The valve may be conveniently held in its raised position by the use of an elastic band attached to the float rod. The band must be removed prior to the subsequent regeneration.

If the softener uses a timed refill without a float, it is necessary to mark the position of the brine tube carefully, and to remove the assembly from the container to prevent the return of fresh water into the vessel. (Note: The volume of fresh water dispensed may be used to determine the accuracy of brine measurement. Refer to section on brine system tests.)

- c. ~~Pressure brine tanks~~—In the place of the brine tank supplied with the softener, use the following apparatus, unless a positive determination of the salt level can be made:



Assemble a tank as shown in Figure E.

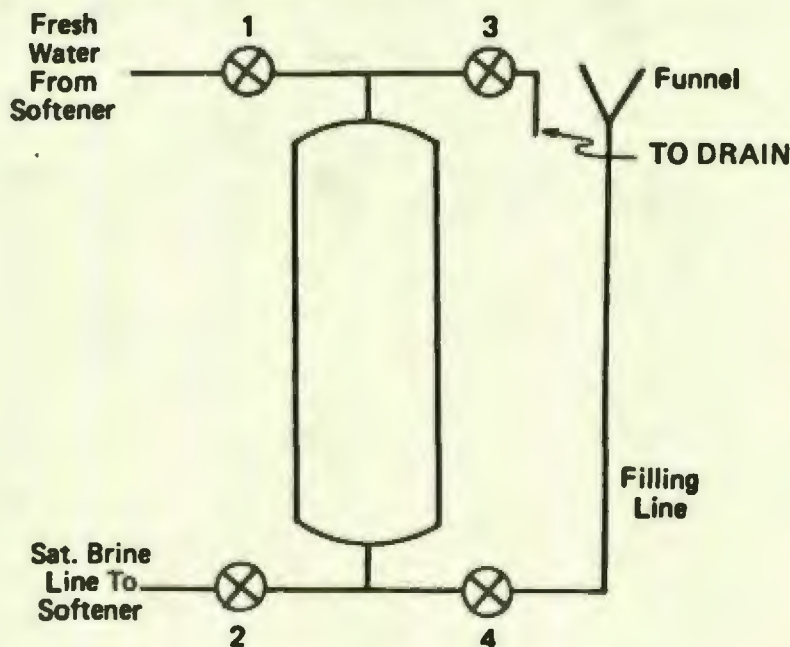


Fig. E

Connect the fresh water and brine lines to the softener under test as indicated. Fill the tank with water through the funnel and flush it thoroughly to remove air. With valves 1 and 2 closed and valves 3 and 4 open, carefully and slowly add the proper amount of saturated brine to the funnel. (Note: 1 gallon of saturated brine contains 2.647 pounds of salt.) When displacement of the fresh water has stopped, close valves 3 and 4 and open valves 1 and 2. Proceed with the regeneration.

Repeat the above procedure for each regeneration. (Note: The first cycle may produce less than the desired volume of brine.)

5. Test records and calculations.

- a. Record hardness of influent composite water sample.
- b. Record amount of salt in pounds for each regeneration.
- c. Record the initial hardness of effluent to determine completion of rinse.
- d. Record the hardness of the effluent at such intervals as required to accurately determine the breakthrough of hardness.
- e. Determine the end point of the softening run as described in the accepted water hardness test procedure at 1 grain per gallon of hardness in the effluent.
- f. Record total gallons of soft water produced.
- g. Softener capacity rating in grains of hardness removed shall be the gallons of acceptable soft water produced at rated flow, multiplied by the average hardness of the raw water as determined by a composite percentage sample required under Paragraph G.2., test water.
- h. At least five complete softening capacity runs shall be made on each model. Data for the first two runs shall be discarded. Rated capacity shall be based on the average of three successive runs which do not show a variation of 10% from the average.



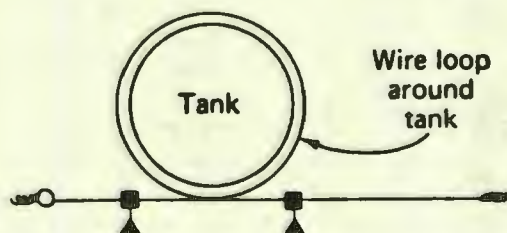
H. RATED SERVICE FLOW

1. Test apparatus and arrangement shall be the same as specified for capacity tests in Section VI.G.1.
2. The test water shall be the same as specified in Section VI.G.2., test procedure.
 - a. Regenerate the softener according to the manufacturer's instructions.
 - b. Establish the rated service flow through the softener.
 - c. Collect a sample of the effluent each minute for a period of ten minutes.
 - d. Determine and record the hardness of each sample.
 - e. No sample shall have a total hardness greater than 1.0 gpg as CaCO_3 .

I. HYDROSTATIC TESTS

1. Test apparatus and arrangement.
 - a. Hand pump, complete with check valves, capable of producing 300 psig pressure.
 - b. Bourdon tube pressure gauge, graduated in increments of not more than 5 psi, with +2% accuracy.
 - c. Micrometer caliper accurate to .001 inch; a range of 0 to 10 inches is recommended.
 - d. Extensometers, accurate to .001 inch.
 - e. Strong but flexible wire, such as stranded picture wire, with metal blocks which can be fixed in position on the wire. Round bar stock approximately 1 inch long, with a longitudinal hole for the wire, and a transverse threaded hole with a set screw, is suitable for this purpose. One length of wire with two blocks will be required for each foot or fraction of a foot of tank sidewall height.
 - f. Shutoff valves and plugs.
 - g. Connect the water supply to the inlet of the pump, and install the pressure gauge in the outlet of the pump.
2. Test procedure for non-metallic tank softeners.
 - a. Close the outlet of the softener with a suitable valve, and connect the softener to the outlet of the pump.
 - b. Fill the system and test unit with water in the temperature range of 55 to 75°F., and flush to avoid pockets of air.
 - c. Close the outlet valve, and gradually raise the hydrostatic pressure until 300 psig, or the rated test pressure of the unit if higher than that value, is reached.
 - d. Maintain the test pressure for 15 minutes, with periodic inspections of the softener for leaks. Any leakage of water from the softener constitutes a failure.
 - e. Slowly open the outlet valve, with the water supply shut off, to bleed the pressure from the softener and system. Disconnect the softener.
3. Test procedure for metallic tank softeners.
 - a. Install the test softener on the elevated rack or stand, and position the extensometers vertically against the tank bottom head, and the top of the softener tank, top-mounted valve, or other solidly mounted upper component.
 - b. Slide two of the movable blocks onto a length of flexible wire, and fasten one end of the wire to a solid post adjacent to the softener approximately 6 inches above the base of the softener tank. Loop the wire around the softener and fasten the free end to a spring, or through a pulley to a suspended weight. Adjust the wire so that it makes the smallest possible loop around the tank and is in the same horizontal plane as the fastenings on both ends. Slide the movable blocks into

position adjacent to the softener and tighten the set screws. A 6" to 8" space between the blocks is suitable for most household softener tanks.



- c. Repeat step b. with additional wires and blocks at not more than 12" intervals up the side sheet of the tank.
- d. Proceed with steps 2.a. and 2.b. as with non-metallic tanks.
- e. With no pressure on the softener, take initial readings from the extensometers, and measure the distances between the movable blocks on each wire, using the micrometer caliper.
- f. Proceed with steps 2.c. and 2.d. as with non-metallic tanks.
- g. Close the inlet valve and slowly open the outlet valve to bleed the pressure from the softener. Repeat the readings of the extensometers and the distances between the movable blocks on the wires. (Note: A decrease in the distance between blocks indicates an increase in tank circumference.)

J. SALT DELIVERED BY BRINE SYSTEM

1. Test apparatus.
 - a. Salometer with concentration charts and temperature correction data.
 - b. Thermometer, glass, calibrated in Fahrenheit degrees.
 - c. Aspirator or educator connected to water line.
 - d. Closed vessel to collect brine under vacuum. A 5 gallon glass bottle, or a non-metallic softener tank may be adapted for this purpose, for household softeners.
 - e. Graduated cylinder, calibrated in .01 gallons, or in ml. A 4000 ml plastic graduated cylinder is convenient for this purpose. (3785 ml equal 1 gallon)
2. Test procedure for open brine tanks with float type valves.
 - a. Install the brine valve in the brine tank according to the manufacturer's instructions, and fill the brine tank with the salt specified. Use adaptors as necessary to connect the brine line to a water line, and fill the tank until the float valve stops flow.
 - b. After a minimum of 16 hours, disconnect the brine line from the water supply, and connect it to the intake of the brine collector. Apply a vacuum to the collector to draw the brine into the vessel. Continue the vacuum until the float valve stops further brine draw.
 - c. Disconnect the vacuum line and drain the collector. Measure the volume of brine, its temperature and salometer reading. Make the necessary temperature corrections and calculate the pounds of salt dissolved and drawn from the brine tank in the cycle.
 - d. Repeat the above cycle no more frequently than once per day. A minimum of five cycles is necessary, with an average of the last three used to calculate the rating. If any of the last three cycles vary more than 10% from the average, the cycles shall be continued until stability, or the lack of stability, is established.

3. Test procedure for open brine tanks with time-flow refills.
 - a. The fresh water dispensed from the softener following the normal brine draw may be used to calculate the salt which would be dissolved. This fresh water may be collected and measured by removing the brine tube, from the vessel used for brine during the capacity tests, or as a separate test after the capacity tests have been completed.
 - b. One gallon of fresh water will dissolve 2.9865 pounds of salt in the formation of saturated brine, and this factor shall be used to calculate the measuring accuracy of the system.
4. Test procedure for pressure brine tank systems.
 - a. The technique used to check pressure brine tank systems will vary, depending upon the specific design. In any case, every effort must be made to determine the amount of salt brine produced for each regeneration cycle. The technique used must be specified in the report.

K. THICKNESS OF GALVANIZING OR COATINGS

1. A variety of instruments may be used for non-destructive tests to determine the thickness of galvanizing or other non-magnetic coating. The standardization and test procedures provided with each instrument shall be used for the tests.

L. DIELECTRIC STRENGTH TEST

1. Application. This test shall be applied to electrical control and operating devices, including but not limited to electrical timers, solenoid valves, motor driven valves, and associated wiring and connections, to check the safety of the assembled electrical system as used on the softener.
2. Apparatus.
 - a. Hi-Pot tester, of the type available from Associated Research, Inc., and Ideal Industries, Inc.
 - b. Insulating stand, platform or blocks of wood or other material which will completely insulate the softener from the ground.
3. Procedure.
 - a. Place the complete softener on the stand, platform or blocks, so that it will be completely insulated from ground, including the floor and electrical or plumbing connections.
 - b. Connect the leads of the tester to appropriate terminals or components as indicated below, turn on tester, increase the applied potential gradually from zero to the required test value of 1000 volts plus twice the maximum rated voltage of the equipment, and hold the voltage at that point for one minute. Any indication of leakage (of more than 0.5 milliamperes), breakdown, arcing or corona, by the tester shall constitute a failure.
 - c. A complete test shall include individual tests:
 - c1. Between uninsulated live metal parts and the enclosure with the contacts open and closed.
 - c2. Between uninsulated live metal parts of different circuits.
 - c3. Between the live circuit and ground, and
 - c4. Between terminals of opposite polarity with the contacts closed. For this last test, transformers, coils or similar devices normally connected between lines of opposite polarity are to be disconnected from one side of the line during the test.

M. 0 to 150 PSIG CYCLE TEST

1. Application. This test shall be applied to complete softener assemblies or to individual components as necessary to demonstrate compliance with the



cycle test requirements for non-metallic components subject to line pressure.

2. **Apparatus.** Assemble the following components as shown in Figures F and G.
 - a. Open sump equipped with a low level alarm and switch to open the electrical circuit in the event of failure of the test unit.
 - b. Positive displacement or centrifugal pump capable of maintaining 150 psig in pressure system during the test.
 - c. Pressure relief valve for operation in 150 psig range.
 - d. Solenoid valves for operation at 150 psig.
 - e. Pressure gauges for operation at 150 psig, with $\pm 2\%$ accuracy.
 - f. Air cushion tank or column.
 - g. Electrical impulse counter with capacity of at least 100,000 cycles.
 - h. Continuous cycling adjustable cam timer with 1 revolution every 5 seconds.
 - i. Bleeder valves for adjustment of pressure increase rate.
3. **Procedure.**
 - a. Fill the test unit with tap water at room temperature and connect to the test apparatus as shown in Figure G.
 - b. Fill the sump with tap water at room temperature and operate the system at low pressure to bleed air from the test unit.
 - c. Set the counter at zero, or record initial reading. Adjust the cam cycle timer, pressure relief valve and bleed valves to produce a pressure cycle from 0 to 150 psig in 1.5 seconds, maximum pressure for just an instant, and an immediate release of pressure. The pressure in the test unit shall return to zero psig before the initiation of another cycle.
 - d. Continue the 0 to 150 psig cycling, with periodic inspections of the test unit and cycle, until 100,000 cycles have been completed. This will require approximately 139 hours or 5.8 days of continuous operation.
 - e. Stop the cam cycle timer so that the 150 psig pressure is on the test unit and inspect the unit for leaks. Any evidence of leakage during the cycle tests or in the final inspection shall constitute a failure of the unit.

N. BURST TESTS FOR NON-METALLIC TANKS

1. The following test is normally conducted by the tank manufacturer, and conformance with the burst pressure requirements may be by certification by the tank manufacturer.
2. **Test procedure.**
 - a. The tank to be tested shall be a complete unit, assembled if necessary to conform to its normal state of use.
 - b. The tanks shall be connected to a water supply thru a pump system incorporating a Bourdon tube pressure gauge with a maximum reading hand or equal, a check valve, a shutoff valve and a drain valve. High strength fittings are to be used for the system subject to the high pressure.
 - c. All remaining tank openings shall be closed by the use of high strength threaded fittings, where possible. Provision shall be made for flushing the tank to free it of air.
 - d. A shield or enclosure shall be provided to protect the operator.
 - e. The entire system shall be filled with water at room temperature, and flushed to avoid the pocketing of air.
 - f. With all outlets closed, the hydrostatic pressure shall be raised at a rate of approximately 100 psi per second until the specified burst pressure is reached, or rupture or fracture of the tank occurs.

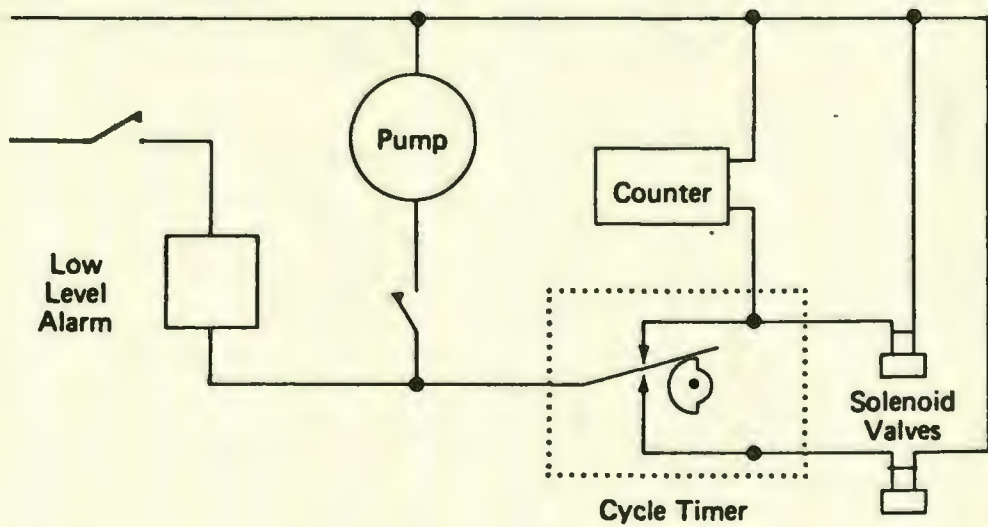


Fig. F

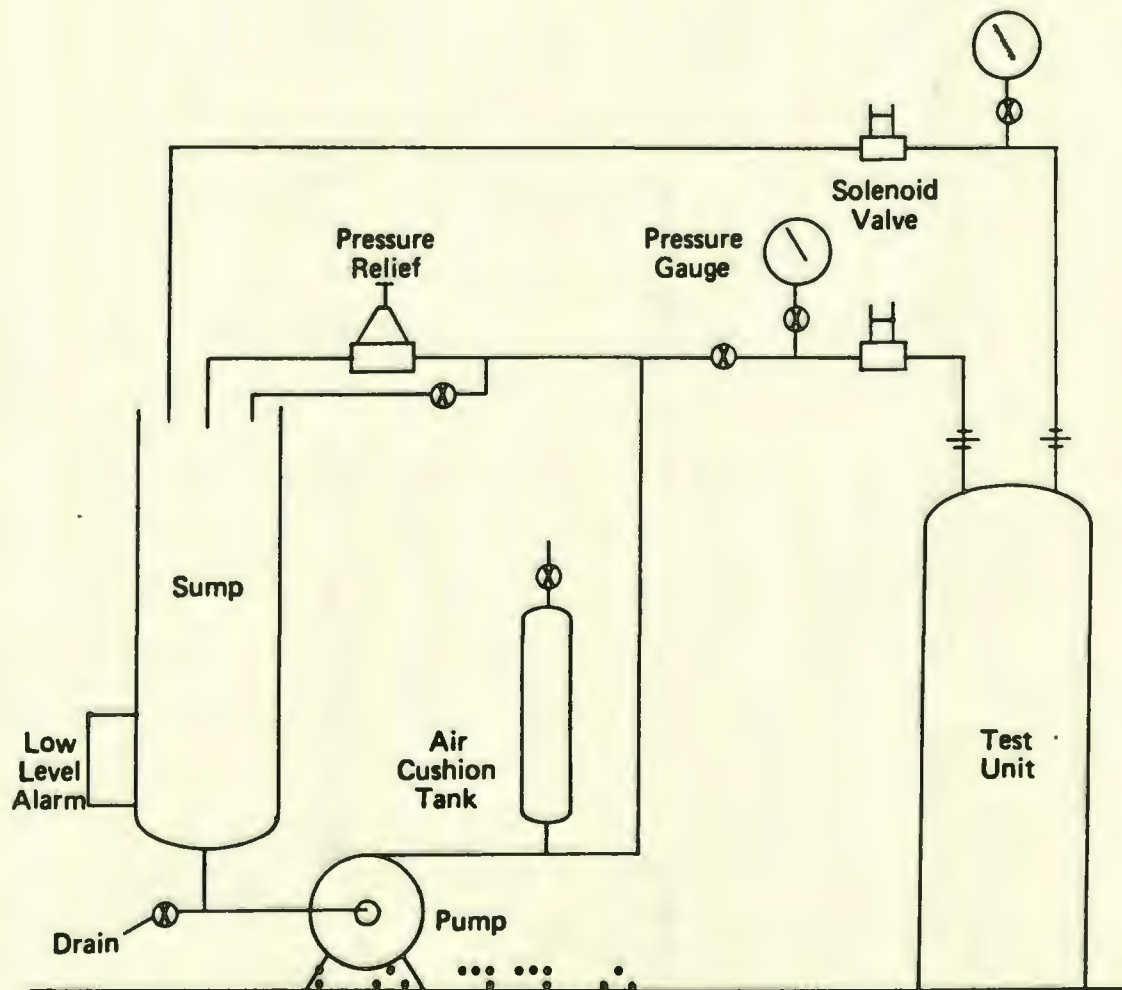


Fig. G

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The objective of this appendix is to provide a standard for installation, sanitation and service. These factors are beyond the direct control of the equipment manufacturer, are not subject to validation by inspection or tests of the softener, and thus are the prime responsibility of the dealer and/or installer.

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APPENDIX I

I. SELECTION OF EQUIPMENT

- A. WATER ANALYSIS.** A suitable chemical analysis of a private water supply shall be furnished with the recommendation for a permanently installed water softener and/or other water conditioning equipment.
- B. SIZING OF WATER SOFTENERS.**
1. Household manual and semi-automatic water softeners shall have sufficient rated softening capacity to deliver soft water at rated flow under normal demands for at least one week between successive regeneration. (See Figure 1.)
 2. Household automatic water softeners with one exchanger tank shall have sufficient rated softening capacity to deliver soft water at rated flow under normal demands for at least three days between successive regenerations. (See Figure 2.)
 3. Household fully automatic water softeners with one exchanger tank shall have sufficient rated softening capacity to deliver soft water at rated flow under normal demands for at least 24 hours between successive regenerations. (See Figure 3.)
 4. Water softeners designed to provide for uninterrupted service shall be capable of delivering soft water under normal intermittent demands at rated flow at all times.
 5. Where the flow rate requirements for a proposed installation are not known, and are impractical to determine by direct measurement, the procedure outlined in Table 1 and Figure 4 may be used.

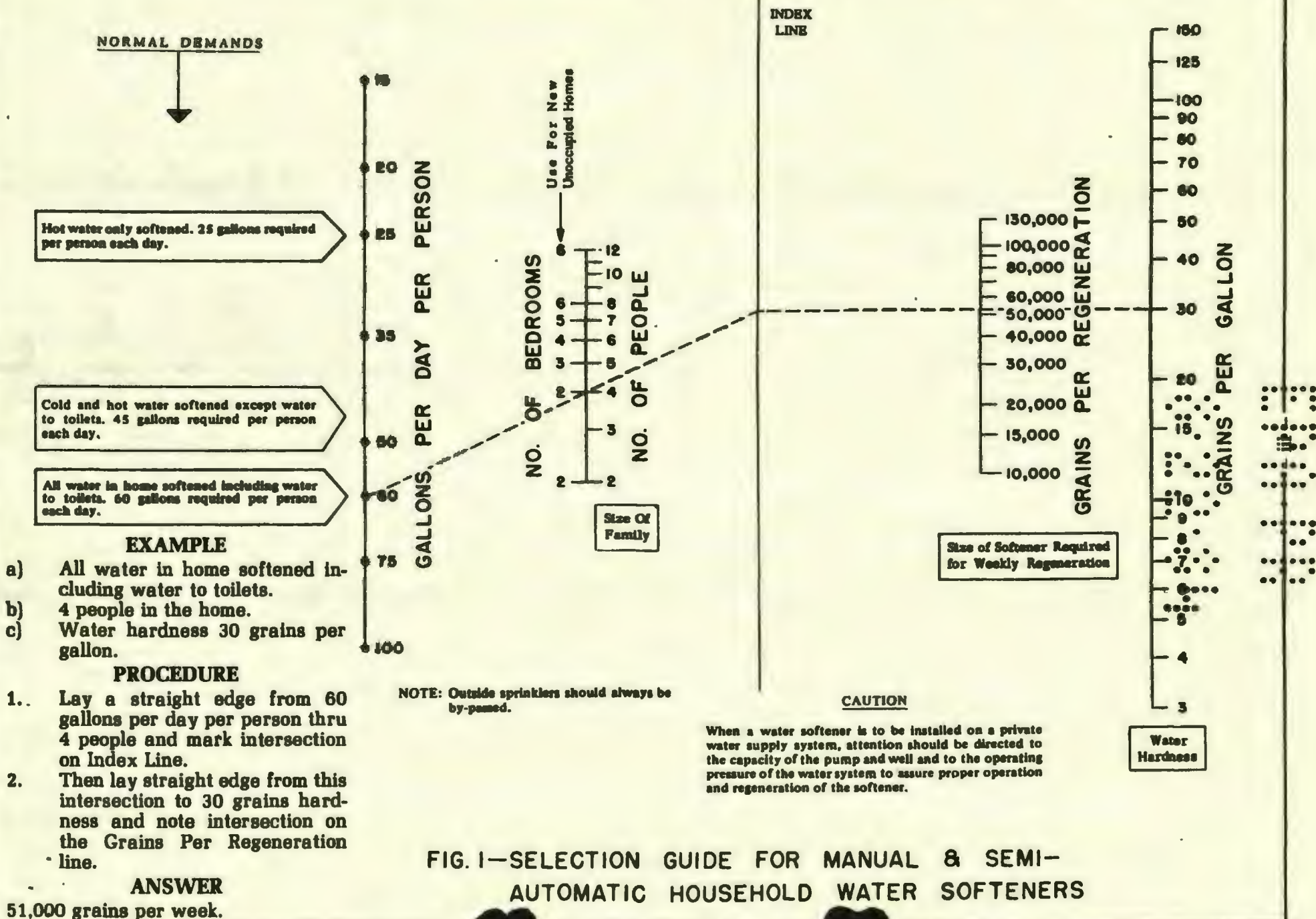
II. INSTALLATION

- A. CODES.** All installations shall be in compliance with applicable plumbing, electrical or qualified specialist codes, as well as the manufacturer's instructions and specifications, except where in conflict with such codes.
1. Regeneration wastes from permanently installed softeners shall be discharged to the building waste system, subject to the following precautions:
 - a. The softener drain line shall not be connected directly to the waste system, but shall be emptied into a laundry tray, floor drain or properly trapped special outlet, preserving an air gap of at least 2 times the diameter of the drain line, but in no case less than 1-1/2 inches, above the top of the receptacle used.
 - b. Installations requiring rinsing of brine through water supply lines shall not be acceptable.
- B. PIPING.** A manual bypass for hard water shall be provided as part of the installation connections. Installations shall preserve the continuity of existing electrical grounding. Where a softener or pressure reducing valve acts as a check valve to prevent the reverse flow of water from a water heater, an acceptable relief valve shall be installed between the softener and the heater, or at the water heater.

- C. **SANITATION.** Good sanitation practices shall be followed during the installation of water softeners. Permanently installed softeners shall be disinfected following installation in accordance with the procedures in Appendix III. Portable exchange softeners and regeneration plants shall meet the sanitation requirements given in Appendix IV.
- D. **SERVICE.** A responsible servicing agency for permanently installed softeners should be permanently located and available within a reasonable distance of the installation.
- E. **INFORMATION REQUIREMENTS.** The dealer and/or installer shall pass on to the user the information provided by the equipment manufacturer for this purpose, and shall also provide the user with the following information, preferably in the form of a permanent card or label mounted or fixed to or near the softener:
1. Bypass instructions.
 2. The name, address and phone number of the responsible servicing agency.

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NORMAL DEMANDS

Hot water only softened. 25 gallons required per person each day.

Cold and hot water softened except water to toilets. 45 gallons required per person each day.

All water in home softened including water to toilets. 60 gallons required per person each day.

EXAMPLE

- a) All water in home softened including water to toilets.
- b) 6 people in the home.
- c) Water hardness 30 grains per gallon.

PROCEDURE

1. Lay a straight edge from 60 gallons per day per person thru 6 people and mark intersection on Index Line.
2. Then lay straight edge from this intersection to 30 grains hardness and note intersection on the Grains Per Regeneration line.

ANSWER

33,000 grains per 3 days.

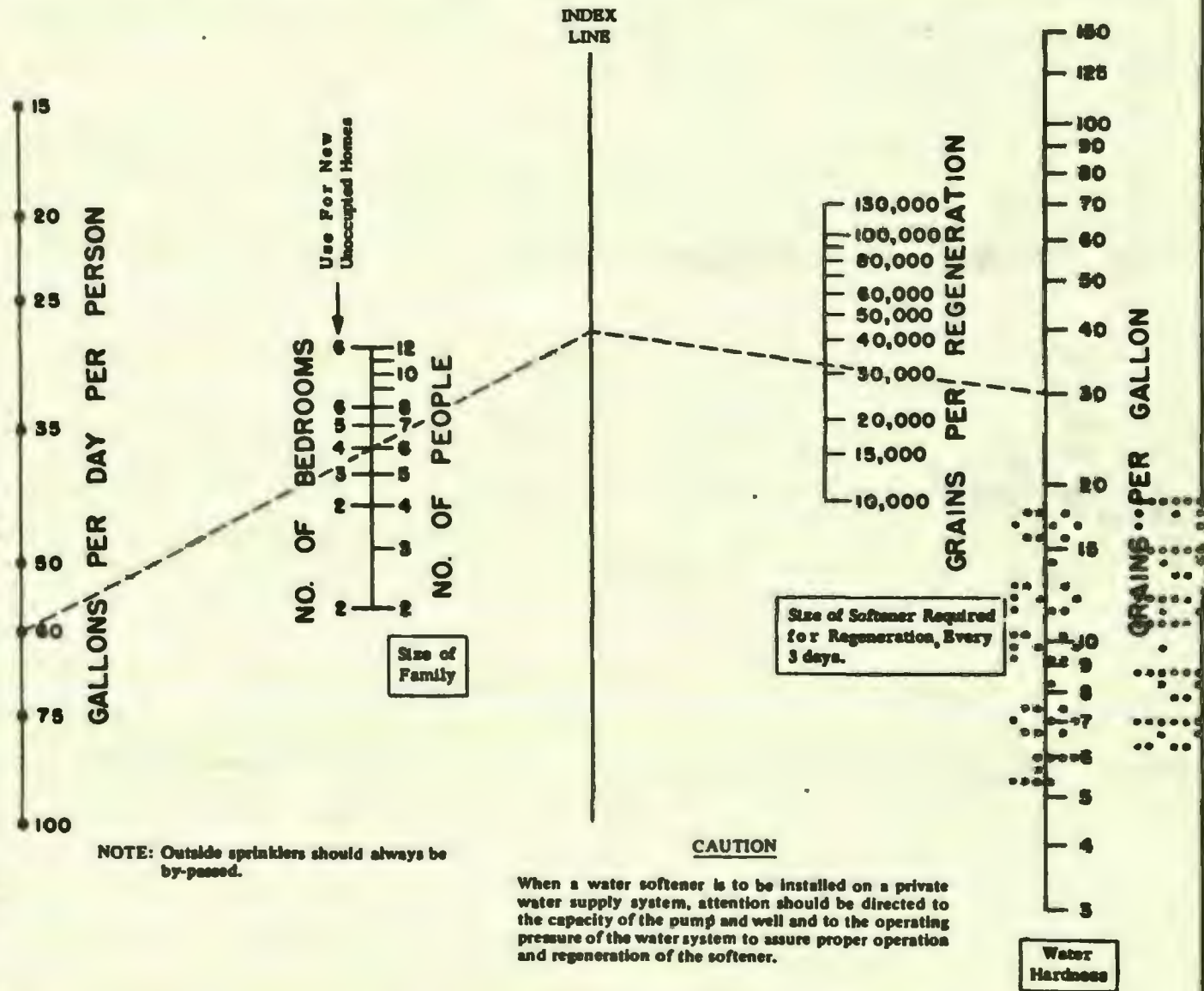


FIG. 2—SELECTION GUIDE FOR AUTOMATIC HOUSEHOLD WATER SOFTENERS

NORMAL DEMANDS



Hot water only softened. 25 gallons required per person each day.

Cold and hot water softened except water to toilets. 45 gallons required per person each day.

All water in home softened including water to toilets. 60 gallons required per person each day.

EXAMPLE

- All water in home softened including water to toilets.
- 5 people in the home.
- Water hardness 20 grains per gallon.

PROCEDURE

- Lay a straight edge from 60 gallons per day per person thru 5 people and mark intersection on Index Line.
- Then lay straight edge from this intersection to 20 grains hardness and note intersection on the Grains Per Regeneration line.

ANSWER

6,000 grains per day.

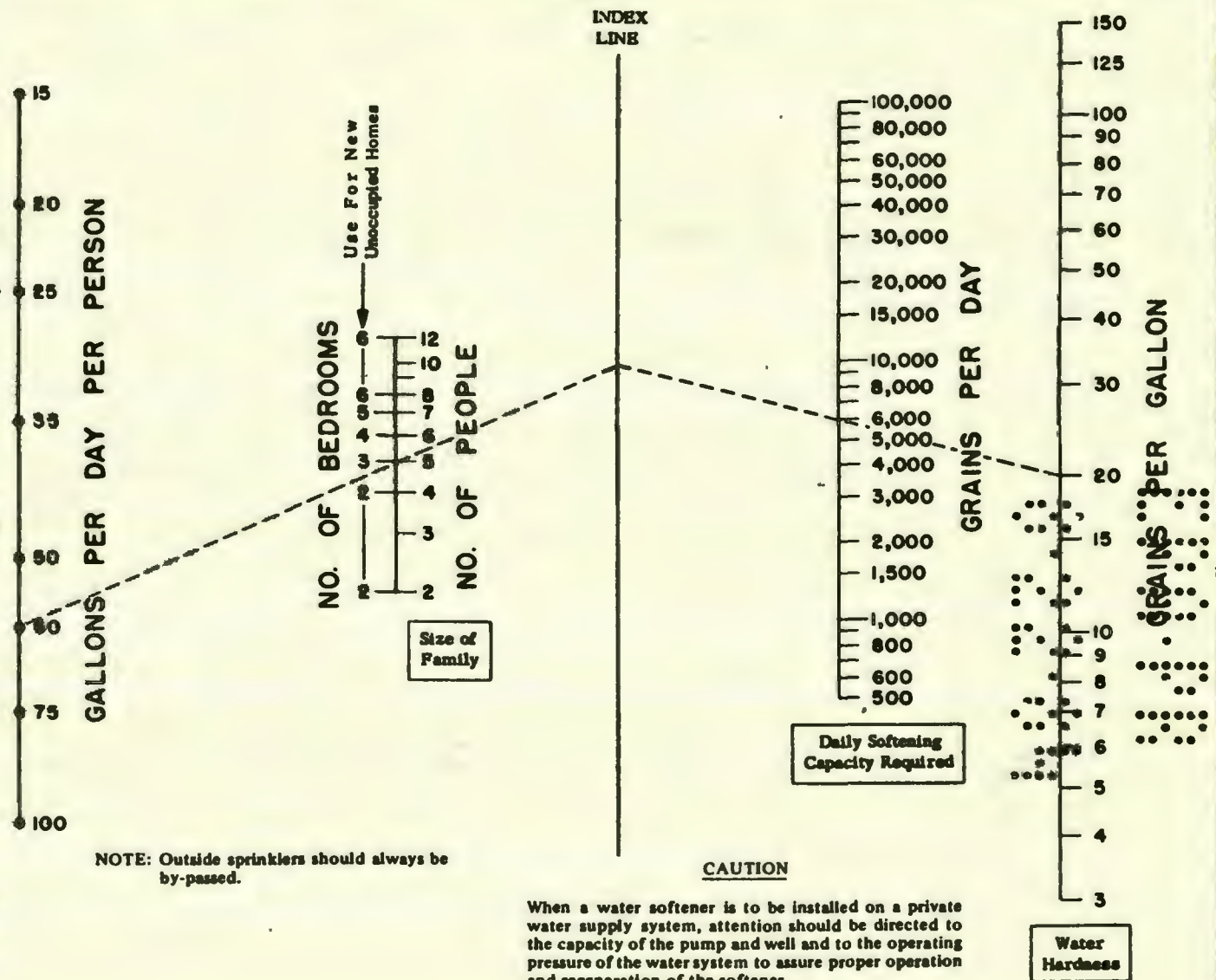


FIG. 3—SELECTION GUIDE FOR FULLY AUTOMATIC HOUSEHOLD WATER SOFTENERS

Guidelines for Estimating Flow Rate Requirements

<u>Fixture or group</u>	<u>Occupancy</u>	<u>Type of supply control</u>	<u>Load in Fixture Units</u>
Water Closet	Public	Flushometer	10
Water Closet	Public	Flush tank	5
Pedestal urinal	Public	Flushometer	10
Stall or wall urinal	Public	Flushometer	5
Stall or wall urinal	Public	Flush tank	3
Lavatory	Public	Faucet	2
Bathtub	Public	Faucet	4
Shower head	Public	Mixing valve	4
Service sink	Office, etc.	Faucet	3
Kitchen sink	Hotel or Restaurant	Faucet	4
Water Closet	Private	Flushometer	6
Water Closet	Private	Flush tank	3
Lavatory	Private	Faucet	1
Bathtub	Private	Faucet	2
Shower head	Private	Mixing valve	2
Bathroom group	Private	Flushometer for closet	8
Bathroom group	Private	Flush tank for closet	6
Separate shower	Private	Mixing valve	2
Kitchen sink	Private	Faucet	2
Laundry trays (1-3)	Private	Faucet	3
Combination fixture	Private	Faucet	3

The estimated flow rate requirements for plumbing fixtures used intermittently on a water supply line may be obtained by multiplying the number of each kind of fixture supplied through that supply line by its load from the above table, adding the products, and then referring to the appropriate curve with this sum.

In using this method, it should be noted that the flow rate required for fixtures or outlets which are likely to impose continuous demands during periods of heavy use of the listed fixtures, such as hose connections, air conditioning units, etc., should be estimated separately and added to the demand for fixtures used intermittently, in order to estimate total demand. Further, the curves in this section are not intended to estimate rare peak flow requirements, but to cover normal flow variations. However, occasional leakage of hardness into the treated water due to unusual high flow requirements will not present major difficulties in the normal installation.

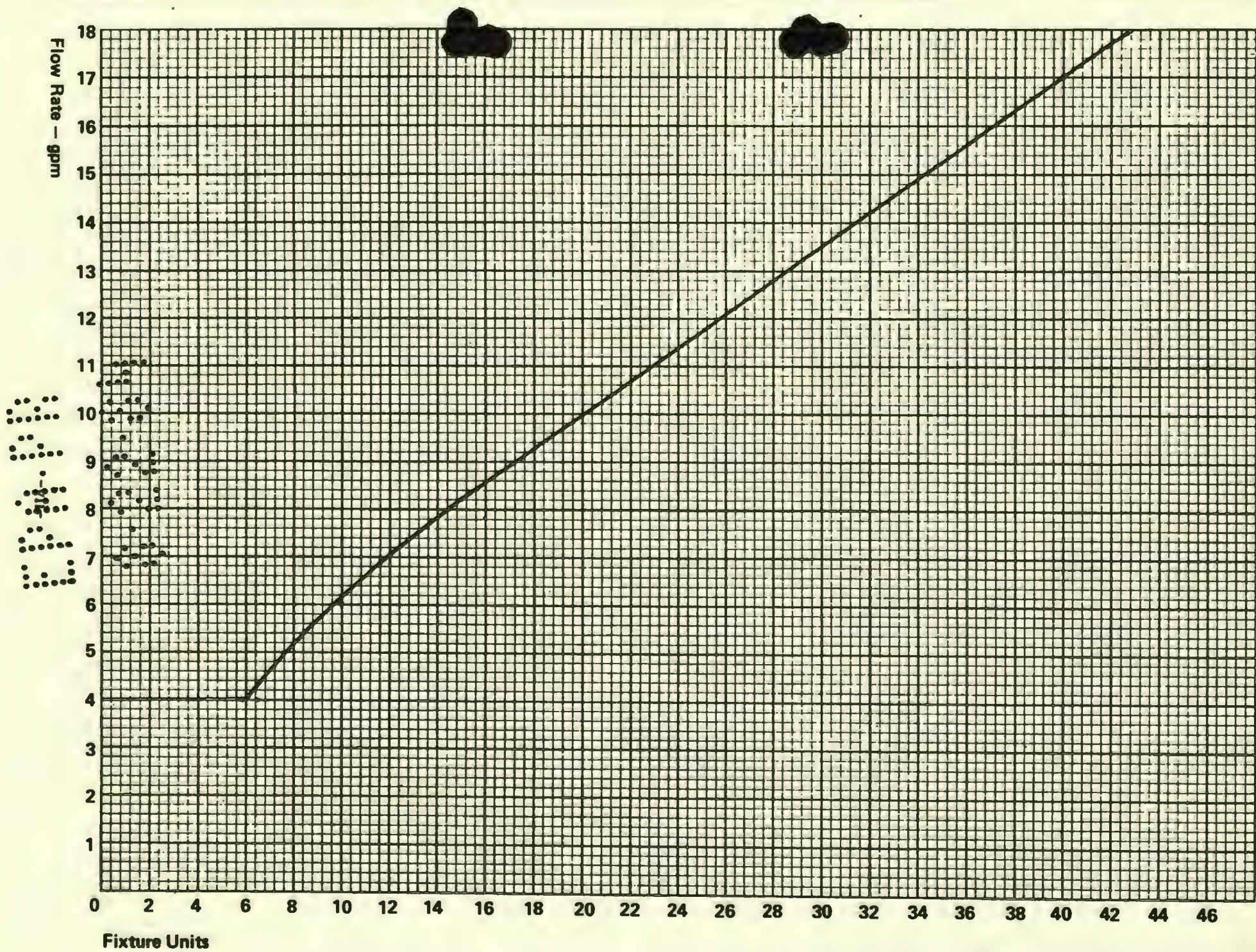
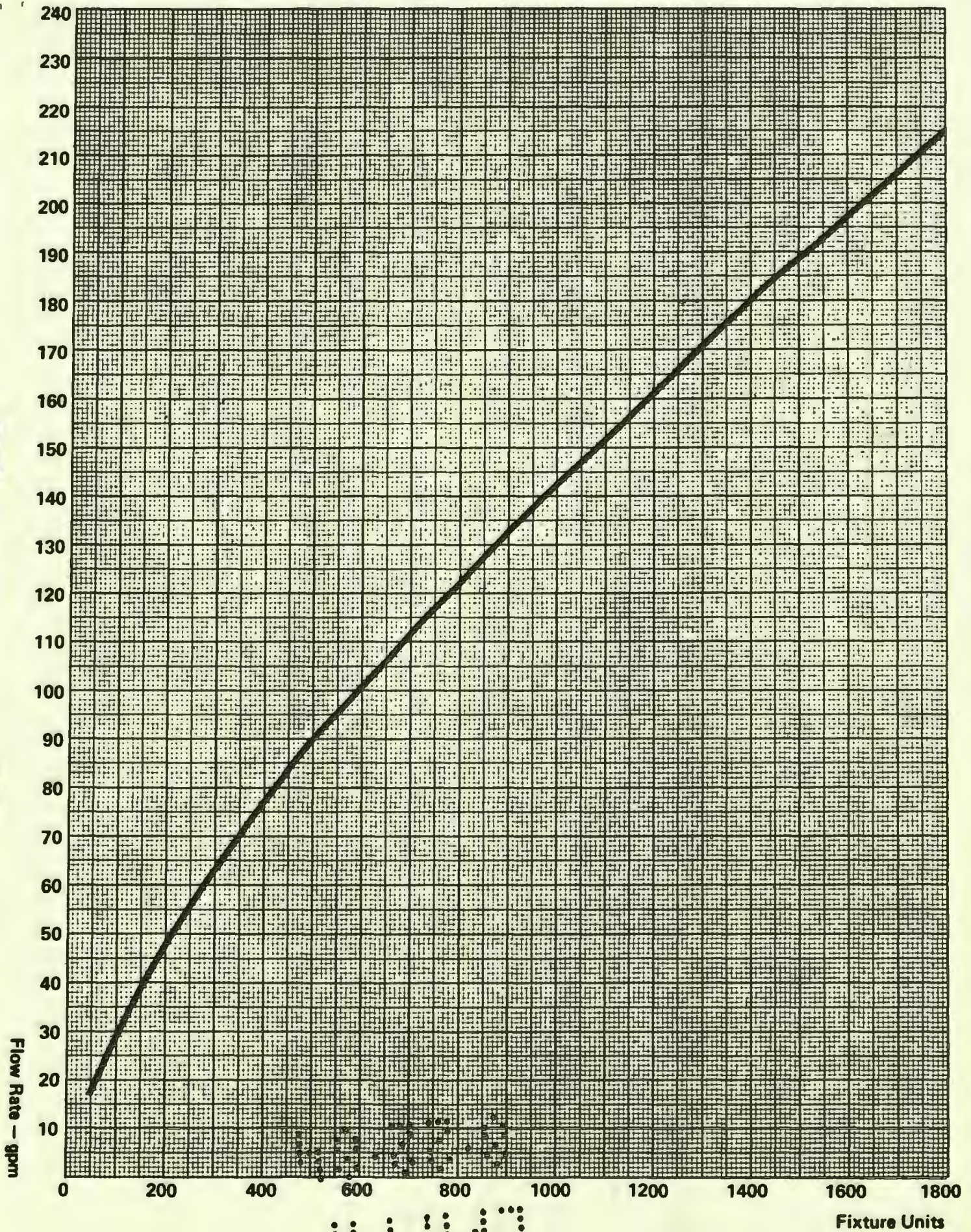


Figure 4a

Figure 4b



APPENDIX II

METHODS FOR THE DISINFECTION OF WATER SOFTENERS

The materials of construction of the modern water softener will not support bacterial growth, nor will these materials contaminate a water supply. However, the normal conditions existing during shipping, storage and installation indicate the advisability of disinfecting a softener after installation, before the softener is used to treat potable water. In addition, during normal use, a softener may become fouled with organic matter, or in some cases, with bacteria from the water supply.

Thus, every softener should be disinfected after installation, some will require periodic disinfection during their normal life, and in a few cases disinfection with every regeneration would be recommended.

Depending upon the conditions of use, the style of softener, the type of ion exchanger, and the disinfectant available, a choice can be made among the following methods.

I. SODIUM OR CALCIUM HYPOCHLORITE

A. **APPLICATION.** These materials are satisfactory for use with polystyrene resins, synthetic gel zeolite, greens and bentonites. They are not recommended for use with phenolic resins or carbonaceous zeolites.

B. **5.25% SODIUM HYPOCHLORITE** solutions are available under trade names such as Clorox, Linco, Bo Peep, White Sail and Eagle Brand Bleach. If stronger solutions are used, such as those sold for commercial laundries, adjust the dosage accordingly.

1. Dosage:

- a. Polystyrene resin; 1.2 fluid ounce per cubic foot.
- b. Non-resinous exchangers; 0.8 fluid ounce per cubic foot.

2. Salt-in-head softeners.

- a. Backwash the softener, open the top, and drain down the freeboard water to about 1/2" above the exchanger.
- b. Pour in the required amount of hypochlorite solution, and refill the softener upflow (backwash procedure).
- c. Close the softener and proceed with the normal downflow regeneration procedure.

3. Brine tank softeners.

- a. Backwash the softener, and add the required amount of hypochlorite solution to the brine well of the brine tank. (The brine tank should have water in it to permit the solution to be carried into the softener.)
- b. Proceed with the normal regeneration.

C. **CALCIUM HYPOCHLORITE**, 70% available chlorine, is available in several forms, including tablets and granules, under trade names such as H.T.H., and Perchloron. These solid materials may be used directly, without dissolving before use.

1. Dosage: 2 grams (approximately 0.1 ounce) per cubic foot.

2. Salt-in-head softeners.

- a. Backwash the softener and open the top.
- b. Pour in the required amount of hypochlorite.
- c. Close the softener and proceed with the normal downflow regeneration procedure.

3. Brine tank softeners.

- a. Backwash the softener, and add the required amount of hypochlorite to the brine well of the brine tank. (The brine tank should have water in it to permit the chlorine solution to be carried into the softener.)**
- b. Proceed with the normal regeneration.**

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NOTES

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APPENDIX III

Sanitation Requirements for Portable Exchange Softeners and Regeneration Plants

I. Regeneration Plants

Regeneration plants shall be constructed and maintained in clean, orderly and sanitary condition. Plants shall be well lighted, properly drained, and have adequate washroom facilities. The water supply to the plant shall meet the bacteriological requirements of the U.S. EPA Drinking Water Standards.

II. Regeneration Equipment

Regeneration equipment shall be constructed and installed for ease in inspection, maintenance and cleaning, and shall be maintained in clean and sanitary condition. Supplies and incidental materials subject to contamination shall not be stored on the floor, but on platforms, shelves or racks provided for that purpose. Bulk storage facilities for salt or other chemicals shall be constructed to prevent the entrance of dirt, drainage or vermin. Low or below ground facilities shall be kept closed or covered as necessary for this purpose.

III. Personnel

All persons involved in the regeneration, exchange, installation, servicing, or any contact with the regeneration equipment or portable exchange units shall have at least annual health examinations, and have current health certificates. Such certificates may be in the form of cards carried by the personnel, or suitable certificates posted in the plant.

IV. Regeneration Sanitation Procedures

All portable exchange softeners shall be adequately disinfected during every regeneration, whether bulk or individual tank regeneration is practiced. This disinfection shall be achieved by the application of chlorine or a chlorine compound such as sodium hypochlorite or calcium hypochlorite during the fresh water rinse, to provide an effluent minimum chlorine residual and time combination as given in the following table:

Minimum Time Minutes	Minimum Chlorine Residual—ppm
4	20
5	15
10	7.5
15	5.0
20	4.0

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Where bulk regeneration procedures are used, the exchange tanks shall be disinfected by the addition of 1 fluid ounce of 1% chlorine solution per cubic foot of tank volume before the return of the ion exchanger to the tank. One percent (1%) chlorine solution may be conveniently prepared by the appropriate dilution of 5, 10 or 15% sodium hypochlorite solutions.

Caps used to close tanks during delivery shall be submerged in 1% chlorine solution during the period of regeneration.

V. Bacteriological Tests

At least one set of water samples shall be tested each month for coliform organisms by a recognized laboratory for each 500 water softeners or fraction thereof regenerated per month, except that not more than two sets of sample per week shall be required. Each set of samples shall include one sample of the regeneration plant water supply, and one sample of the effluent from a regenerated water softener after approximately 10 gallons of fresh water have passed through the softener.

VI. Exchange Procedures

Handling and exchange procedures shall guard against accidental or incidental contamination of softeners. Regenerated softener fittings or connectors shall be protected by tight, secure and disinfected closures, which shall not be removed until necessary for installation. Exhausted softeners shall be protected by similar closures during transportation to the regeneration plant, but disinfection is not necessary.

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Amendment published in Federal Register: SUBPART D- FOOD ADDITIVES - Page 55
* February 10, 1968; 33 F.R. 2845 Remove old page 55 and insert this
new page in your reprint.

§ 121.1148 Ion-exchange resins.

Ion-exchange resins may be safely used in the treatment of food under the following prescribed conditions:

(a) The ion-exchange resins are prepared in appropriate physical form, and consist of one or more of the following:

(1) Sulfonated copolymer of styrene and divinylbenzene.

(2) Sulfonated anthracite coal meeting the requirements of ASTM-D388-38, Class I, Group 2.

(3) Sulfite-modified cross-linked phenol-formaldehyde, with modification resulting in sulfonic acid groups on side chains.

(4) Methacrylic acid-divinylbenzene copolymer.

(5) Cross-linked polystyrene, first chloromethylated then aminated with trimethylamine, dimethylamine, diethylenetriamine, or dimethylethanolamine.

(6) Diethylenetriamine, triethylene-tetramine, or tetraethylenepentamine cross-linked with epichlorohydrin.

(7) Cross-linked phenol-formaldehyde activated with one or both of the following: Triethylene tetramine and tetraethylenepentamine.

(8) Reaction resin of formaldehyde, acetone, and tetraethylenepentamine.

(9) Completely hydrolyzed copolymers of methyl acrylate and divinylbenzene.

(10) Completely hydrolyzed terpolymers of methyl acrylate, divinylbenzene, and acrylonitrile.

(11) Sulfonated terpolymers of styrene, divinylbenzene, and acrylonitrile or methyl acrylate.

(12) Methyl acrylate-divinylbenzene copolymer containing not less than 2 percent by weight of divinylbenzene, aminated with dimethylaminopropylamine.

(13) Methyl acrylate-divinylbenzene copolymer containing not less than 3.5 percent by weight of divinylbenzene, aminated with dimethylaminopropylamine.

(14) Epichlorohydrin cross-linked with ammonia.

* (15) Sulfonated tetrapolymer of styrene, divinylbenzene, acrylonitrile, and methyl acrylate derived from a mixture of monomers containing not more than a total of 2 percent by weight of acrylonitrile and methyl acrylate. *

(b) Ion-exchange resins are used in the purification of foods, including potable water, to remove undesirable ions or to replace less desirable ions with one or more of the following: Bicarbonate, calcium, carbonate, chloride, hydrogen, hydroxyl, magnesium, potassium, sodium, and sulfate except that the ion-exchange resins identified in paragraph (a) (12) and (13) of this section are used as follows:

(1) The ion-exchange resin identified in paragraph (a) (12) of this section is used only to treat water for use in the manufacture of distilled alcoholic beverages, subject to the following conditions:

(i) The water is subjected to treatment through a mixed bed consisting of the resin identified in paragraph (a) (12) of this section and one of the strongly acidic cation-exchange resins in the hydrogen form identified in paragraph (a) (1), (2), and (11) of this section; or

(ii) The water is first subjected to the resin identified in paragraph (a) (12) of this section and is subsequently subjected to treatment through a bed of activated carbon or one of the strongly acidic cation-exchange resins in the hydrogen form identified in paragraph (a) (1), (2), and (11) of this section.

(iii) The temperature of the water passing through the resin beds identified in subdivisions (i) and (ii) of this subparagraph is maintained at 30° C. or less, and the flow rate of the water passing through the beds is not less than 2 gallons per cubic foot per minute.

(iv) The ion-exchange resin identified in paragraph (a) (12) of this section is exempted from the requirements of paragraph (c) (4) of this section, but the strongly acidic cation-exchange resins referred to in subdivisions (i) and (ii) of this subparagraph used in the process meet the requirements of paragraph (c) (4) of this section, except for the exemption described in paragraph (d) of this section.

(2) The ion-exchange resin identified in paragraph (a) (13) of this section is used only to treat water having a pH of 8.0 or higher, subject to the following conditions:

(i) The water is first subjected to the resin identified in paragraph (a) (13) of this section in the bicarbonate form and is subsequently subjected to treatment through a bed of the cation-exchange resin in the hydrogen form identified in paragraph (a) (10) of this section, so that no more than 35 weight-percent of the bicarbonate ion entering this bed passes through the bed when the conditions of subdivision (ii) of this subparagraph are met.

Amendment published in Federal Register: SUBPART D--FOOD ADDITIVES--Page 55.1
* February 10, 1968; 33 F.R. 2845 Remove old page 55.1 and insert this new page in your reprint.

(11) The temperature of the water passing through the resin beds identified in paragraph (a) (10) and (13) of this section is maintained at 30° C. or less and the flow rate of the water passing through the bed is not less than 0.5 gallons per cubic foot per minute.

(c) To insure safe use of ion-exchange resins, each ion-exchange resin will be:

(1) Subjected to pre-use treatment by the manufacturer to guarantee a food-grade purity of ion-exchange resins, in accordance with good manufacturing practice.

(2) Accompanied by label or labeling to include directions for use consistent with the intended functional purpose of the resin.

(3) Used in compliance with the label or labeling required by subparagraph (2) of this paragraph.

(4) Found to result in no more than 1 part per million of organic extractives obtained with each of the named solvents, distilled water, 15 percent alcohol, and 5 percent acetic acid when, having been washed and otherwise treated in accordance with the manufacturer's directions for preparing them for use with food, the ion-exchange resin is subjected to the following test: Using a separate ion-exchange column for each solvent, prepare columns using 50 milliliters of the ready to use ion-exchange resin that is to be tested. While maintaining the highest temperature that will be encountered in use pass through these beds at the rate of 350-450 milliliters per hour

the three test solvents distilled water, 15 percent (by volume) ethyl alcohol, and 5 percent (by weight) acetic acid. The first liter of effluent from each solvent is discarded, then the next 2 liters are used to determine organic extractives. The 2-liter sample is carefully evaporated to constant weight at 105° C.; this is total extractives. This residue is fired in a muffle furnace at 850° C. to constant weight; this is ash. Total extractives minus ash equals the organic extractives. If the organic extractives are greater than 1 part per million of the solvent used, a blank should be run on the solvent and a correction should be made by subtracting the total extractives obtained with the blank from the total extractives obtained in the resin test. The solvents used are to be made as follows:

Distilled water (de-ionized water is distilled).
15 percent ethyl alcohol made by mixing 15 volumes of absolute ethyl alcohol A.C.S. reagent grade, with 85 volumes of distilled de-ionized water.

5 percent acetic acid made by mixing 5 parts by weight of A.C.S. reagent grade glacial acetic acid with 95 parts by weight of distilled de-ionized water.

* (d) The ion-exchange resins identified in paragraph (a) (1), (2), (11), and (15) of this section are exempted from the acetic acid extraction requirement of paragraph (c) (4) of this section. *

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The industry served by WQA and its members
encompasses water quality improvement for
homes, businesses, industry, and institutions
in these broad areas: • drinking water
• working water
• waste water

WATER QUALITY ASSOCIATION
477 EAST BUTTERFIELD ROAD
LOMBARD, ILLINOIS 60148
312/969-6400

84-843

03 AUG 1984

Ionics, Incorporated
3039 Washington Pike
P.O. Box 99
Bridgeville, PA 15017

Attention: Walter J. Polens
Vice President

Gentlemen:

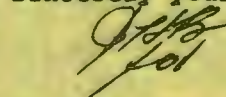
Subject: General Ionics Model IQ 0820B Bacteriostatic
Water Conditioner
EPA Registration No. 35900-3
General Ionics Model IQ 1240B Bacteriostatic
Water Conditioner
EPA Registration No. 35900-9
Your Application Dated July 16, 1984

The submission of the revised Homeowners Manuals and color brochures satisfies the requirements, in that regard, for acceptance of the amended registration of the referenced products, as stated in our letter dated January 26, 1984.

Stamped copies of the labeling for both products are enclosed for your records.

According to our records, however, we have not received a copy of the Water Quality Association Industry Standard, referred to on the WQA gold seal, as requested in paragraphs one and three of our letter dated December 7, 1983. This document should be submitted for inclusion in these files.

Sincerely yours,



John H. Lee
Product Manager (31)
Disinfectants Branch
Registration Division (TS-767C)

Enclosure

RD/DIS:J.Lee:DCR-44235:WANG-0360K:KIM:Raven:479-2013:7/31/84/Del.8/13/84

CONCURRENCES							
SYMBOL ▶							
SURNAME ▶							
DATE ▶							

revised 7/13/83

Record Number 126531

Reference Number 13

Inout Date _____

CODING FORM FOR APPLICATIONS FOR REGISTRATION/AMENDMENTS

File Symbol/Reg.No. 35900-3 PM 31 Action Code 301

10 Description (Amend/Resubmissions only) _____

05 Interstate Call-in ☐ (Y) Yes ☒ (N) No **15** Child-Resistance Packaging ☐ (C) Carcinogenic ☐ (S) Service Parts

20 Registration Type: ☐ (1) Conditional ☒ (2) Unconditional ☐ (3) Non-Residence Use Only

25 Proposed Classification: **30** Final Classification:

☐ (R) Restricted ☐ (R) Restricted ☒ (G) General ☐ (G) General ☒ (N) Not Classified

35 Date on Application: 07/16/84 **40** EPA Received Date: 07/20/84 **45** Date Received by PM: 07/20/84

50 Method of Support: ☐ (1) Cite-A-17 ☒ (4) Not Applicable ☐ (2) Alternate ☐ (3) Not Submitted ☐ (3) Combined ☐ (6) Owner Submission **55** Certification Statement: ☐ (1) Yes ☒ (3) Not Applicable ☐ (2) Not Submitted

Reviews Requested: ☐ (7) Total Submission

FILE IN 15

DATE SENT	DUE DATE	DATE RETURNED	RESPONSE CODE	RESPONSE DATE
			17	7/30/84

108 Status: _____

115 FINAL ACTION: Response Code 17 **120** Response Date 03 AUG 1984

75-DAY RESPONSE DUE DATE: ☐ (Y) Yes ☐ (N) No

GENERAL IONICS Model IQ Bacteriostatic

METER-CONTROLLED FULLY AUTOMATIC STAINLESS STEEL WATER CONDITIONER

General Ionics presents the first Bacteriostatic Water Conditioner that not only softens municipally-treated water but also inhibits the growth of bacteria within the filter media bed. Additionally, the Model IQ — the unit with a brain — features state-of-the-art Metered Regeneration Control that provides salt savings of up to 40% over conventional timers.

The Model IQ Control monitors the conditioned water you use, and then initiates a regeneration cycle only when the ion exchange mineral is near exhaustion.

With the IQ Regeneration Control there is no need for "vacation" or

"guest" switches. This "brain" automatically meters any increase or decrease in water usage, and therefore regenerates only when necessary. As a result, you realize savings three ways: (1) salt consumption, (2) water usage, and (3) sewage taxes.

The General Ionics Model IQ Bacteriostatic Water Conditioner gives you absolutely carefree convenience and reliable performance, plus the unique polishing of your water with the silver-impregnated activated carbon that removes objectionable tastes and odors.

The Water Conditioner with a brain gives you all these advantages:

- Bacteriostatic feature inhibits

growth of bacteria within filter media bed while removing odors and tastes

- Meter-controlled regeneration for big savings
- Corrosion-resistant 6-cycle bronze control valve for trouble-free operation
- Beautifully polished chrome/nickel stainless steel mineral tank with a limited lifetime warranty
- High-density polypropylene brine tank with a 5-year limited warranty
- High-capacity S-759 resin for superior hardness removal as well as high recovery rates during regeneration

GENERAL IONICS — THE MAGIC NAME IN WATER CONDITIONING SINCE 1947

SPECIFICATION	MODEL NUMBER		
	IQ 0820-B	IQ 1240-B	IQ 1690-B
Capacity (Grains)	20,000	40,000	90,000
Tank Size — Diameter by Height (Inches)	8 x 51	12 x 59	18 x 67
Salt Storage Capacity (Pounds)	250	200	400
Brine Tank Size — Diameter by Height (Inches)	18 x 30	18 x 30	24 x 40



IONICS
IONICS, INCORPORATED

MANUFACTURERS OF GENERAL IONICS WATER CONDITIONERS
P.O. BOX 99 • BRIDGEVILLE, PA 15017 (PITTSBURGH DISTRICT)
INTERNATIONAL WATER CONSULTANTS AND EQUIPMENT MANUFACTURERS
MEMBER WATER QUALITY ASSOCIATION

ACCEPTED

AUG 03 1984

Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under
EPA Reg. No. 35900-3

E.P.A.

Environmental Protection Agency

REGISTERED
No. 35900-3
No. 35900-9

BEST DOCUMENT AVAILABLE

GENERAL IONICS Model IQ

BACTERIOSTATIC



HOMEOWNER'S MANUAL

GENERAL IONICS WATER CONDITIONER Model IQ and Model EE



ACCEPTED

AUG 03 1984

Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under
EPA Reg. No. **35900-3**

IONICS, INCORPORATED



IMPORTANT

This booklet contains your Owner Limited Warranty Card. Be sure that it is filled in and mailed to the factory within two weeks of installation. Failure to do so will result in voiding the warranty.

Your General Ionics Dealer is...

Congratulations

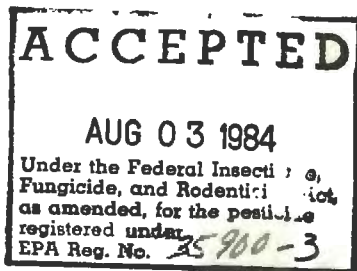
Ionics, Incorporated welcomes you to a new, carefree way of life with conditioned water. You can take pride and satisfaction knowing that you own the very best.

We are proud that you have selected the General Ionics deluxe quality Water Conditioner for your home. Your sound judgment is supported by the wide acceptance received for these units throughout the world. More and more quality conscious homeowners are purchasing General Ionics Water Conditioning equipment because of its superior performance and its premium quality workmanship.

The following pages of this booklet will introduce you to your new General Ionics Water Conditioner by explaining operation, care and maintenance. In addition, the booklet provides recommendations for getting the very best performance from your unit as well as answers to commonly asked questions.

A E Daniel

Chairman of Board and
Chief Executive Officer
Ionics, Incorporated





General Information

Your General Ionics Water Conditioner is completely automatic. It will provide an abundance of conditioned water with just an occasional addition of salt to the brine tank when the salt reaches the "add salt" level. Your unit was thoroughly tested at the factory before shipping, and again at the time of installation.

The automatic timer is set to "regenerate" your water conditioner at night while you are sleeping. From experience, this is the best time because your water demand is lowest then and regeneration will not interfere with baths, washing clothes, etc. However, unconditioned water is available from all faucets during the regeneration cycle. With the General Ionics Water Conditioner you are never without water.

It is a good idea to wipe the unit occasionally and then apply a good coat of wax. This procedure will keep your water conditioner looking bright and clean for a lifetime.

In case some problem should arise, you can manually by-pass the unit by throwing one lever (see illustration on page 5). Then call your authorized General Ionics dealer. He has been trained in all phases of maintenance and repair work and will have the unit back in operation quickly. If there is not a General Ionics dealer in your vicinity, then contact another reliable water conditioning firm. Failing that, please write directly to the factory: Ionics, Incorporated, P.O. Box 99, Bridgeville, Pennsylvania 15017, Attention: Service Department.

NOTE: Whenever you correspond with the factory, be sure to include the model and serial number written on the inside back cover of this booklet. Explain the problem as best you can. With this information factory technicians can handle the problem promptly with little chance of error.

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AUG 03 1984

Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under
EPA Reg. No. 3590-3

Regeneration

Your General Ionics Water Conditioning unit consists of a tank filled with a premeasured amount of a special mineral called S-759, formulated especially for General Ionics equipment. On top of the tank is the control valve/timer, which works on the same principle as an electric clock. Alongside the unit is a storage tank which holds the salt and brine for the regeneration cycle.

Regeneration means recharging or recleaning the special S-759 mineral. It is important to know that the entire cycle is automatic and you will have nothing to do with it. The following steps are for your own enlightenment... and to demonstrate the thoroughness of the automatic cycle: 1. Backwashing, which reverses the action of the water, throws off the sediment (called turbidity) that has been filtered out of the water, and flushes it down the drain. 2. Salt, as brine, is injected into the unit to clean and revitalize the S-759 mineral. (The amount of salt used is controlled by a float valve, which operates the same as the float in the water tank of your toilet.) 3. Slow rinse. 4. Fast rinse. 5. Valve automatically returns to the service position to again supply you with good, conditioned water.

What Salt To Use

Salt is your water conditioner's fuel. Using the right fuel is as important here as it is to get the best performance from your car. It is strongly recommended to use only nugget or pellet type salt in your water conditioner. This type of salt is pure and free of undesirable insolubles. Nugget or pellet type water conditioner salt is available from your General Ionics dealer.

NOTE: Common rock salt is NOT recommended because much of it contains insolubles. The continued use of common rock salt will necessitate more frequent cleaning of the brine tank, or worse, it may cause a malfunction of the valving. However, specially processed water conditioner rock salt, as handled by your local dealer, may be used.

When To Add Salt

The brine tank has a capacity up to 250 lbs. of nugget or pellet salt. You can add salt whenever it is most convenient for you, but it is important to replenish the supply before the pellets reach the "add salt" level indicated by the label on the salt storage tank.

Bridging Or Caking

The salt platform in your brine tank has been engineered to eliminate salt bridging or caking. However, under certain atmospheric conditions these circumstances can occur and will prevent the salt from coming in contact with the water level. When your water seems to be hard, check the salt in the storage tank. If it appears to be bridging or caking, break it up with a short wooden stick. In doing so, be careful not to probe the full depth of the brine tank because you may damage the salt platform.

Bacteriostatic — An Ionics Exclusive

If your General Ionics Water Conditioner is an Environmental Protection Agency (EPA) Registered Bacteriostatic model, you have two unique added features. First, this unit inhibits the growth of bacteria within the S-759 ion exchange filter media bed. Second, it reduces and in many cases completely eliminates organic tastes, odors and colors from the water.

Inside the Bacteriostatic model water conditioner a layer of HYgene™ silver-impregnated activated carbon (EPA Registered Bacteriostatic Water Filter Media) is placed on top of the S-759 mineral. The silver acts as the inhibiting agent while the activated carbon adsorbs objectionable tastes, odors and colors.

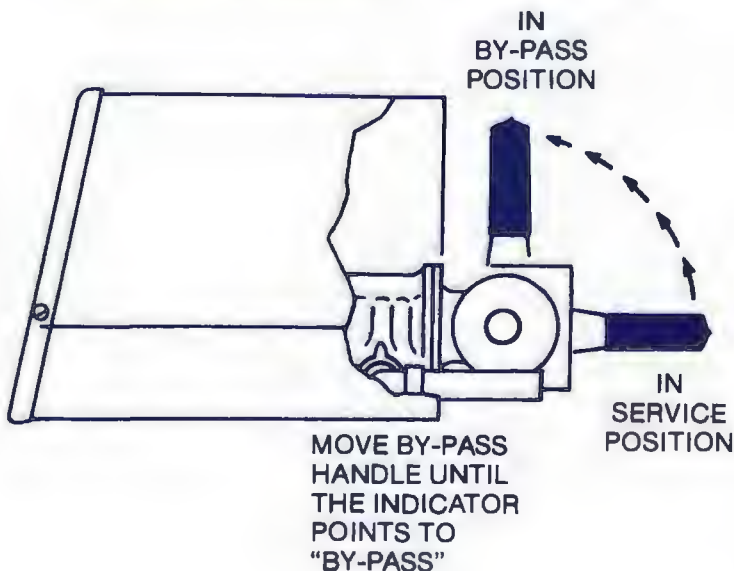
EPA has restricted the Bacteriostatic models for use only on treated municipally supplied tap water, which precludes its use on well water.

ACCEPTED

AUG 03 1984

Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under
EPA Reg. No. 35900-3

MODELS IQ AND EE



By-Pass Instruction

In case any problem should occur that cannot be immediately resolved, it is recommended to manually by-pass the unit as shown and call your authorized General Ionics dealer.



Model IQ Special Features

Meter-Controlled Regeneration

The Model IQ control minimizes salt usage and water waste by accurately monitoring the conditioned water and then initiating a regeneration only when the S-759 mineral is near exhaustion. Six-cycle downflow brining assures accurate salting while the adjustable time regeneration program uses the minimum amount of water required per cycle.

In service a mechanical meter accurately monitors water usage. This feature eliminates the costly wasted capacity due to premature regenerations.

Vacation Periods

There is no need to be concerned about disconnections or adjustments on your Model IQ Water Conditioner before leaving your home for long periods of time. When no water is being used, the "brain" will simply remain idle for that period of time and be ready to monitor water usage when you return home.

High Usage Demand/Weekend Guests

The Model IQ Water Conditioner's "brain" will automatically recognize the increase in water usage and regenerate before running out of conditioner water. Unpredictable water demand is never a problem with the General Ionics Model IQ.

How To Set The Time Of Day

If you should have a power failure or want to adjust for Daylight Savings Time, follow these instructions:

Press and hold in the red button to disengage the drive gear.

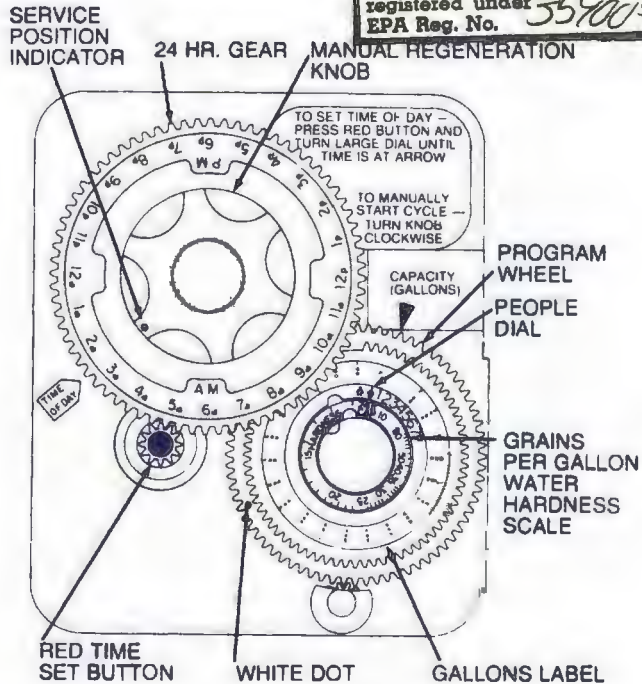
Turn the large gear until the actual time of day is opposite the time of day pointer.

Release the red button to engage the drive gear.

ACCEPTED

AUG 03 1984

Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under
EPA Reg. No. 35900-3



How To Manually Regenerate Your Water Conditioner At Any Time

Turn the manual regeneration knob clockwise.

This slight movement of the manual regeneration knob engages the program wheel and starts the regeneration program.

The black center knob will make one revolution in the following three hours and stop in the position shown in the drawing.

Even though it takes three hours for this center knob to complete one revolution, the regeneration cycle of your unit might be set for only one-half of this time.

In any event, conditioned water may be drawn after rinse water stops flowing from the water conditioner drain line.



Model EE Special Features

Energy Efficient Control

This fully automatic six-cycle valve with 12-day timer schedules regenerations at preset intervals. The day and the hour for regeneration, as well as the salt dosage, have been set at the time of installation by the installer. These settings have been carefully calculated according to your family needs and to get the maximum recovery of the resin while minimizing water usage. **Do Not Change These Settings Without First Consulting Your Dealer.**

Vacation Periods

Why allow your water conditioner to continue regenerating while you are on vacation? It would be a waste of salt to recharge an already charged mineral bed. With your Energy Efficient General Ionics Model EE Water Conditioner, vacation time has been taken into account. Simply move the by-pass valve lever (see illustration on page 5 of this manual) until the indicator points to "by-pass". By doing so, the unit will continue to go through the preset regeneration cycles, but actually it will not regenerate. When you return home, move the by-pass valve lever back to the "service" position and you will again have conditioned water as before.

High Usage Demand/Weekend Guests

As mentioned previously, your General Ionics Model EE unit is set for your own needs. Higher than normal usage such as weekend guests will naturally place a greater demand for conditioned water on the unit. The method for manually regenerating the unit is covered on page 9. This "extra" regeneration will not interfere with the regular programmed cycle.

How To Set The Time Of Day

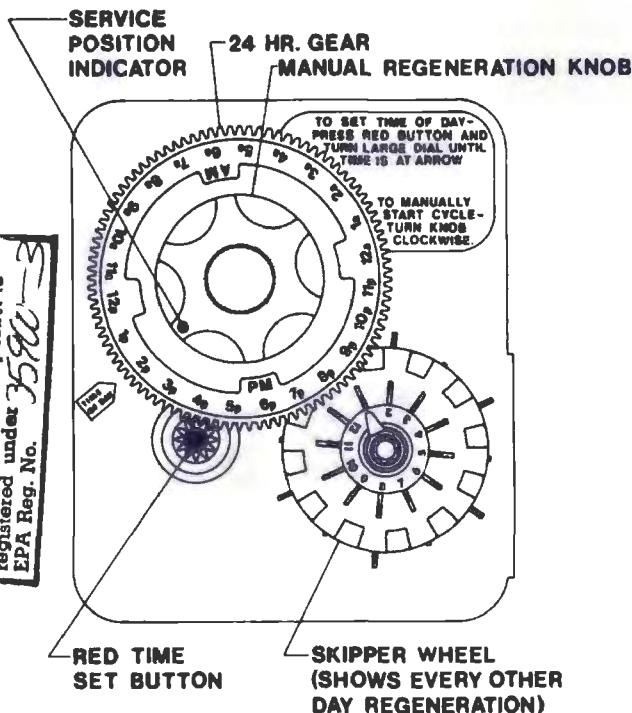
If you should have a power failure or want to adjust for Daylight Savings Time, follow these instructions:

Press and hold in the red button to disengage the drive gear.

ACCEPTED

AUG 03 1984

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 590-3



Turn the large gear until the actual time of day is opposite the time of day pointer.

Release the red button to engage the drive gear.

How To Manually Regenerate Your Water Conditioner At Any Time

Turn the manual regeneration knob clockwise.

This slight movement of the manual regeneration knob engages the program wheel and starts the regeneration program.

The black center knob will make one revolution in the following three hours and stop in the position shown in the drawing.

Even though it takes three hours for this center knob to complete one revolution, the regeneration cycle of your unit might be set for only one-half of this time.

In any event, conditioned water may be drawn after rinse water stops flowing from the water conditioner drain line.

Questions And Answers

Q. What is water conditioning?

- A. Water Conditioning is that branch of engineering that determines the chemical characteristics of a tap water supply, as it enters your home, and treats these characteristics so as to provide water more suitable and economical for household use.

Q. Why is it essential to improve water quality?

- A. Beyond being an absolute necessity of life, water is an outstanding cleaning agent. The trouble is that nature does a lot of things with water long before you have a chance to use it in your laundry or at your kitchen sink. You get it, as it were, second hand. Therefore, improving your water quality by water conditioning is just as essential as any other home appliance.

Q. Does the conditioned water have a "different" taste?

- A. Taste is difficult to define as no two people have the same sense of taste. A water conditioner will remove certain minerals and turbidity from the water, giving you a cleaner, better tasting water.

Q. Will conditioned water give a cleaner, brighter wash?

- A. Yes. For best results, you should use the proper amount of laundering agent. Keep in mind a 60 to 80% soap saving can be achieved with conditioned water. Learn to use less laundering agent because none of the cleansing compound will be wasted as in hard water cleaning. The amount of laundering agent you use depends on: (1) its effectiveness, (2) the volume and temperature of water, (3) the size of the wash load, and (4) the type and amount of dirt and grime.

Q. What effect will conditioned water have on plumbing?

- A. Before the water was conditioned, the hard water caused a scale build-up in the hot water pipes and water heater. Scale acts as an insulating material. In the water heater, scale reduces heat transmission, wastes fuel and often causes heating coil and tube failure. The installation of a water conditioner not only prevents further scale formation but will gradually remove previously formed scale deposits. A recent study indicates that softened water offers a saving of 23% in energy cost in the operation of a hot water heater.

Q. Are the minerals which a conditioner removes from hard water essential to health?

- A. No. The quantity of minerals found in hard water are not essential to good health.

Q. Is the sodium in softened water harmful to people on restrictive diets?

- A. Much depends on the strictness of the diet itself.

When the patient is on an extremely restrictive diet, he should drink neither hard nor softened water. Under these conditions he should have demineralized water, distilled water, or water known to be free of sodium for drinking and for the cooking of foods. Such patients are commonly hospitalized.

In establishing a salt-free diet for patients, physicians should not overlook the fact that even hard water may contain appreciable amounts of sodium. To determine the amount a complete analysis of the water is necessary.

Q. How much sodium is added to softened water?

- A. Each grain per gallon (GPG) hardness removed adds 7.875 milligrams (mg) of sodium to a liter of water, which is approximately one quart. The average daily sodium intake of an adult individual is 3,000 to 4,000 milligrams and the average fluid intake is 1.6 to 2.0 liters per day. A liter is slightly more than four 8-ounce glasses of water. Two liters per day or 8.4 eight-ounce glasses of water amounts to a total sodium intake from a source of softened 8 GPG water of 125.16 milligrams. This is approximately 3% of the average daily sodium intake.

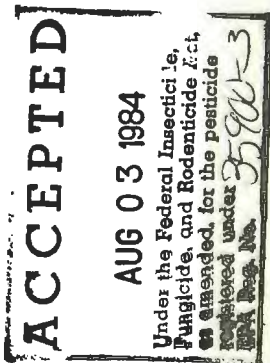
There is another way to answer this question, and that depends on the hardness of your raw water. The following table shows the additional amount of sodium consumed by drinking ONE quart of softened water.

Initial Water Hardness	Sodium Added By Softening
5 Grains/Gallon	37.5 Milligrams/Quart
10 Grains/Gallon	75.0 Milligrams/Quart
20 Grains/Gallon	150.0 Milligrams/Quart
40 Grains/Gallon	300.0 Milligrams/Quart

Q. How does this sodium content of conditioned water compare to sodium found in common foods?

- A. The data in the following table demonstrate the usual range of sodium in common foods.

Food	Amount	Milligrams Of Sodium
Milk	2 Cups	226
Bread	2 Slices	322
Corn Flakes	1 Ounce	260
Tomato Juice	4 Ounces	504
Chili	1 Cup	1,194
Tomato Soup	1 Cup	932
Beef Broth	1 Cup	1,152
Frankfurter	1 Medium	610
Hamburger (Fast Food)	1/4 Pound	1,510
Catsup	1 Tablespoon	204
Canned Baked Beans	3/4 Cup	1,130
Canned Asparagus	1/2 Cup	560
Frozen Peas	1/2 Cup	295
Cottage Cheese	4 Ounces	457
Parmesan Cheese	1 Ounce	528
Pretzels	1/4 Pound	1,925



It is important to note that about 2/3 of the daily water intake of any individual is through food and only about 1/3 from water itself.

General Ionics Water Conditioner LIMITED WARRANTY

This should be kept in a safe place by the owner

GENERAL CONDITIONS

Ionics, Incorporated, Bridgeville, Pa., warrants that the General Ionics Water Conditioner to which this limited warranty applies is free from defects in material and workmanship. The attached limited warranty agreement card must be filled out, mailed to, and received by Ionics, Incorporated, within two (2) weeks of the date of installation of the equipment for this limited warranty to be effective.

This limited warranty is extended directly by the manufacturer to the owner, and is the sole warranty applicable. Any other warranties or guarantees, oral or written, expressed or implied, are not recognized.

LIMITED LIFETIME WARRANTY ON MINERAL TANK

This General Ionics Water Conditioning unit carries a limited warranty on the mineral tank. Any such mineral tank that becomes unusable because of leakage, corrosion, or rupture will be replaced or repaired at the option of Ionics, Incorporated. The defective tank must be returned to Ionics, Incorporated, transportation prepaid, within 30 days from date of failure for this limited warranty to be effective.

ELECTRICAL PARTS - LIMITED WARRANTY

Electrical components are warranted for a period of one (1) year of date of installation, provided the defective part is returned, prepaid to Ionics, Incorporated. Valve and/or control valve parts are warranted for a period of five (5) years from date of installation. Any such components found to be defective will be replaced or repaired, within five (5) years of date of installation, provided the defective part is returned, prepaid, to Ionics, Incorporated.

SALT STORAGE TANK - LIMITED WARRANTY

There is a five (5) year warranty on salt storage tank. Any such storage tank that becomes unusable because of leakage or corrosion will be replaced or repaired at the option of Ionics, Incorporated. The original tank must be returned to Ionics, Incorporated, transportation prepaid, within 30 days from date of failure for this limited warranty to be effective.

Salt Storage Tank components are warranted for a period of one (1) year of date of installation, provided the defective parts are returned prepaid to Ionics, Incorporated.

EXTENT OF LIMITED WARRANTY

Under terms of this limited warranty, all tanks are replaced or repaired by Ionics, Incorporated, on the basis of F.O.B. manufacturer's plant. Transportation, labor, installation, and service costs are to the customer's account and are not covered by this limited warranty.

LIMITATIONS OF WARRANTY

This limited warranty shall be effective only if the Water Conditioner covered by the limited warranty is properly installed in accordance with installation and operating instructions furnished with the equipment by Ionics, Incorporated, and in accordance with local plumbing codes and ordinances.

This limited warranty shall be void if any part of the Water Conditioner has been subjected to accident, alteration, abuse, neglect, or freezing.

This limited warranty shall not be assignable by the original purchaser and applies only to the original equipment.

Model Number _____ Tank Number _____

Date Installed _____

Dealer _____

Address _____

Telephone _____

ACCEPTED

AUG 03 1984

Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under
EPA Reg. No. 35901-3



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IONICS, INCORPORATED

P.O. Box 99 • Bridgeville, PA 15017



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IONICS, INCORPORATED

**P.O. Box 99
Bridgeville, PA 15017**

**INTERNATIONAL WATER CONSULTANTS AND
EQUIPMENT MANUFACTURERS • MEMBER
WATER QUALITY ASSOCIATION**



IONICS
IONICS, INCORPORATED

P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE A. C. 412 343-1040 TWX 5106973299

July 16, 1984

Mr. John H. Lee, Product Manager (31)
U.S. Environmental Protection Agency
Disinfectants Branch, Registration Division (TS-767C)
401 M Street S.W.
Washington, D. C. 20460

SUBJECT: Your Letter of Jan. 26, 1984
General Ionics Model IQ 1240B Bacteriostatic Water Conditioner
EPA Reg. No. 35900-9
General Ionics Model IQ 0820B Bacteriostatic Water Conditioner ✓
EPA Reg. No. 35900-3

Dear Mr. Lee:

In accordance with your subject letter allowing us six (6) months to make certain changes in both our Homeowner's Manual and color brochure, we have made these changes as follows:

1) Homeowner's Manual

On page 10, line 3 "---- of a raw water supply ----" has been revised to read "---- of a tap water supply ----".

2) Color Brochure

- A) The first statement has been changed from "General Ionics presents the only EPA registered bacteriostatic water conditioner --- to read "General Ionics presents the first bacteriostatic water conditioner ----".
- B) We have deleted the statement "General Ionics equipment is worthy to be part of the USS Nautilus and the USS Enterprise" and the pictures beneath the statement.
- C) The seal which encircled "EPA Registered ----" has been deleted.

As requested, please find enclosed five (5) copies of the revised color brochure and Homeowner's Manual.

We trust everything is now in proper order with regard to this subject registration.

Very truly yours,

IONICS, INCORPORATED

Walter J. Polens
Vice President

WJP:mle

Enclosures

revised 7/13/83

Record Number 11713

Reference Number 13

Inout Date _____

CODING FORM FOR APPLICATIONS FOR REGISTRATION/AMENDMENTS

File Symbol/Reg.No. 35900-3 PM 31 [8] Action Code 300?

[10] Descriptor (Amend/Resubmissions only) _____

[05] Intrastate Call-in / ☐ (Y) Yes [15] Child-resistant / ☐ (C) Certification Packaging
/ ☒ (N) No / ☐ (S) Service Person

[20] Registration Type:

/ ☐ (1) Conditional / ☒ (2) Unconditional

/ ☐ (3) Non-residential Use Only
/ ☒ (N) Not Applicable

[25] Proposed Classification: [30] Final Classification:

/ ☐ (R) Restricted

/ ☐ (R) Restricted

/ ☒ (G) General

/ ☐ (G) General

/ ☒ (N) Not Classified

[35] Date on Application:

01/11/84
MO DAY YR

[04] EPA Received Date:

01/11/84
MO DAY YR

[40] Date Received by PM:

01/11/84
MO DAY YR

[80] Method of Support:

/ ☐ (1) Cite-All

/ ☒ (4) Not Applicable

/ ☐ (1) Yes

/ ☒ (3) Not Applicable

/ ☐ (2) Alternate

/ ☐ (5) Not Submitted

/ ☐ (2) Not Submitted

/ ☐ (3) Combined

/ ☐ (6) Owner Submission

Reviews Requested:

/ ☐ (7) Total Submission

[85] Certification Statement:

RD

PM

PL

CH

EF

DATE
SENT

DUE
DATE

DATE
RETURNED

RESPONSE
CODE

RESPONSE
DATE

38	2-8-84

[108] Status: _____

[115] FINAL Response
ACTION: Code 38

[120] Response
Date

02/22/84
MO DAY YR

75-DAY RESPONSE DUE DATE: / ☐ (Y) Yes / ☐ (N) No

22 FEB 1984

Ionics, Incorporated
P.O. Box 99
Bridgeville, PA 15017

Attention: Walter J. Polens

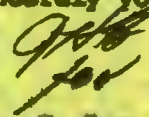
Gentlemen:

Subject: General Ionics Model IQ1240B
Bacteriostatic Water Conditioner
EPA Registration No. 35900-9
General Ionics Model IQ0820B
Bacteriostatic Water Conditioner
EPA Registration No. 35900-3
Your Submission Dated January 13, 1984

This is in reply to your letter of January 13, 1984, regarding the statement and pictures concerning the USS Nautilus and USS Enterprise that appear on the color brochure for these products.

These products were registered for use on municipally treated tap water in the home. To suggest or recommend that these products may be used in any other manner is misleading and therefore unacceptable. To use these products in any other manner is considered a misuse. The statements referred to in the article attached to your letter concerning one company that sells razors versus another company that sells razors has no bearing on this situation concerning the use/misuse of a pesticide product. As indicated in item b(2) of our letter dated January 26, 1984, the referenced statement and pictures must be deleted from the color brochure within six (6) months from that date. Labeling, revised as indicated, must be submitted to us within that time period.

Sincerely yours,


John H. Lee
Product Manager (1)
Disinfectants Branch
Registration Division (TS-767C)

RD-DIS:DCR-11962:LeeJohn:pac:Raven:557-2226:RD-16:2/15/84:del.3/2/84

CONCURRENCES

SYMBOL ▶								
SURNAME ▶								
DATE ▶								



IONICS
IONICS, INCORPORATED

P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE A. C. 412 343-1040 TWX 5106973299

January 13, 1984

Mr. John H. Lee, Product Mgr. (31)
Disinfectants Branch
Registration Division (TS-767C)
U. S. Environmental Protection Agency
401 M Street S. W.
Washington, D. C. 20460

SUBJECT: Your Letter December 7, 1983 in reference to
General Ionics Model IQ 1240B Bacteriostatic Water
Conditioner with HYgene, EPA Reg. No. 35900-9
Application dated November 22, 1983

and Your Letter November 7, 1983 in reference to
General Ionics Model IQ 0820B Bacteriostatic Water
Conditioner with Hygene, EPA Reg. No. 35900-3
Application dated October 25, 1983

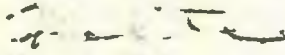
Dear Mr. Lee:

I respectfully submit for your consideration a copy of an article that appeared on page 21 of the Thursday, January 12, 1984 edition of The Wall Street Journal. I have used a highlighting pencil to highlight the parts I think directly parallel our statement on our specification sheet to the effect that General Ionics equipment is worthy to be part of the USS Nautilus and the USS Enterprise. This is the article where Norelco was sued by Remington Corporation for stating in their advertising that its Norelco electric razor had been selected by the National Aeronautics and Space Administration to be the first shaver in space. As noted in the article, Remington felt that Norelco had improperly implied an endorsement by NASA but a federal court in Connecticut disagreed and dismissed the Remington suit. Our statement is not even as strong as Norelco's was and their statement was not considered as an endorsement. I therefore respectfully request that you consider our statement as not an endorsement.

Again, thank you very much for any consideration in this matter.

Very truly yours,

IONICS, INCORPORATED


Walter J. Polens
Vice President

WJP:mle

Enclosure

THE WALL STREET JOURNAL

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MARKETING

More Firms File Challenges To Rivals' Comparative Ads

By JOHN KOTEN

Staff Reporter of THE WALL STREET JOURNAL

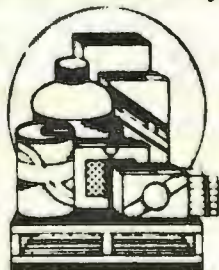
IS EASTERN AIRLINES truly "America's favorite way to fly"? Does Ford Motor Co. make "the best-built American cars and trucks"? And how does Carnation Co. know for sure that "three out of four" canines really prefer its New Breed dog food to all other brands?

While numerous surveys have shown that most people are likely to dismiss such claims as hype, to at least one audience they can be a matter of great concern: the competition. And whether out of pride or genuine business interest, more companies are striking back when they think competitors have gone too far.

Challenges against advertising are increasing in the courts, before the Federal Trade Commission, and through a variety of private channels. Just last week, Chesebrough-Pond's Inc. sued Procter & Gamble Co. and ad agency Benton & Bowles in federal court, charging that P&G used flawed scientific data to support a claim for its Wondra skin lotion. P&G responded by filing a suit against Chesebrough-Pond's asserting that advertising for its Vaseline Intensive Care skin lotion is misleading. Both companies claim their products are the best.

"We've seen a definite jump in cases in the last five years," says Ronald H. Smithies, who oversees a division of the Council of Better Business Bureaus division that arbitrates advertising disputes between competitors. National Broadcasting Co., which runs a similar program for ads that appear on the network, says it settled 83 challenges last year, compared with 57 in 1982. "Ten years ago you could have counted the number on one hand," says Richard Gitter, NBC's vice president of broadcast standards.

ADVERTISERS ATTRIBUTE the rise in the number of squabbles to the popularity of comparative advertising, which now accounts for 35% of all television commercials. Stiffer competi-



INSIDE:

PHILIPPINES' central bank governor is removed, page 23.
U.S. DOUBTS sincerity of North Korean proposal, page 27.
DIGITAL EQUIPMENT is shunned by analysts, page 49.

Congress Seen Unlikely to Act On Acid Rain

By ANDY PASZTOR

Staff Reporter of THE WALL STREET JOURNAL

MANCHESTER, N.H. — Environmental activists from 30 states cheered and stomped their way into national headlines and prime-time news last weekend during a conference here to discuss ways to combat acid rain. Democratic presidential candidates wooed the crowd, each trying to outdo the others in proclaiming his commitment to clean air.

But despite the hoopla, the conference's immediate goal—swift congressional passage of legislation to curb acid rain—probably won't be accomplished.

Many participants privately concede that a badly divided Congress isn't likely to break a three-year impasse and pass a tough acid-rain measure before the November election. The harder that environmental groups push for a bill, the more opposition they are likely to stir up among Midwestern utilities, state officials and other groups that contend such legislation would be unfair to their regions and too expensive. Even environmentalists are split over the best way to pay for the cleanup and the economic dislocation.

Sen. Gary Hart of Colorado, one of the

Executives Say S Is Most Serious E

By MIKE CONNELLY

Staff Reporter of THE WALL STREET JOURNAL

As this year's presidential campaign begins, top business executives say one issue concerns them most: the federal deficit.

Amid a recovery that most executives characterize as strong or very strong, concern over most other economic problems has diminished. Inflation still worries executives, but much less than the deficit. Fears of renewed recession are small, and concern over high interest rates has declined sharply. Even the problems of foreign competition now seem less serious to executives.

"Our country is in a desperate condition in regard to the deficit," says the chairman of a real estate concern. "No politician or The Wall Street Journal or other newspaper has addressed the question. What are we going to do about the deficit? Where do we go from here?"

The business executives are ready for strong moves. Many favor steps that President Reagan has resisted—further cutting spending on social programs, cutting planned increases in defense spending and delaying the start of tax indexation, a program that would prevent inflation from pushing people into higher tax brackets. Executives at large and medium-sized companies even favor raising taxes.

"Crazy Budget"

"The crazy budget is the root of most of the evils—and inflation emphasizes it," says the president of a pharmaceuticals-distribution company.

company: "The concern for a crunch somewhere down the line."

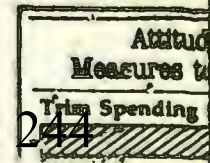
The possibility lead to other economic problems depends on the executive of a major company. Adds an executive: "When there is high borrowing, an amount of borrowing rates."

A few executives and Mr. Reagan's caused part of the deficit cuts give people more confidence, to cut taxes to increase the deficit is necessary."

And some executives credit for trying to reduce spending, though there was a significant reduction in the deficit would have been a lot more.

But overwhelming think the president in 10 say he should

WSJ/Gallup Survey



Chrysler Corp. and Ford, for instance, have been fighting for months over which company has the best quality—and some in the industry suspect that tips from Chrysler are behind a current investigation into Ford's advertising.

The weapons used in such battles are getting more sophisticated as well. To back assertions that competitors' advertising is misleading or inaccurate, companies are increasingly turning to elaborate scientific tests and consumer surveys. To challenge Mars Inc.'s claim that its Three Musketeers candy bars offer "more of what you buy chocolate for," another candy company provided the Better Business Bureau with a "perception test" showing most people take the Mars phrase to mean that Three Musketeers has more chocolate than other products—which it doesn't. Result: Mars recently agreed to discontinue use of the slogan.

At NBC, Mr. Glitter says, disputes over ad claims frequently get bogged down in a mass of technical data. "We had one case that turned into a fight between scientists over the validity of using an electron microscope to support a claim in a commercial," he says. "It took us weeks to get to the bottom of that one."

MOST TIMES the decision boils down to who has the best study. Irritated by Eastern's ads, American Airlines submitted research purporting to show that Eastern actually is America's least-favorite way to fly. But when Eastern came back with independent surveys and figures showing it carried more passengers in the U.S. than other airlines, the Better Business Bureau denied American's challenge.

Groups that monitor advertising say the rise in the number of disputes has occurred despite greater efforts to document claims before putting them in ads. "Corporations are becoming very serious about what they say," notes Winnie Gorlin, a vice president of program practices at CBS Inc. "The substantiation has become very complex."

But that hasn't discouraged competitors from asserting that the supporting research itself is somehow flawed. When AMF Inc. ran television commercials declaring that an independent study had demonstrated that tennis players "overwhelmingly preferred" its new Head racket, Chesebrough-Pond's challenged the tests, claiming that its Prince rackets hadn't been strung to the correct tension. AMF denied the charge but withdrew the ads before the case was settled.

ONE FREQUENT MISTAKE by advertisers is making claims that are too broad. That is what happened to Carnation, which touted its New Breed dog food as better than all other brands. When a smaller competitor was able to demonstrate that dogs found its product more savory than New Breed, Carnation was forced to modify its ads. Now it says that New Breed is the best of the "leading brands."

Whether or not the outcomes of such battles make any great difference in sales is a matter of speculation. But the possibility that they might apparently is enough for some companies. "You just can't sit by while a competitor disparages your product," says Joseph Durkin, an attorney at American Cyanamid Co.

an

comprehensive acid-rain control bill are "almost nonexistent in 1984." He urged environmentalists to plan more for the long run and scale back some of their expectations.

The main reason for the legislative impasse is the complex and regionally divisive nature of the problem. Most scientists believe acid rain is caused when sulfur and other pollutants, primarily from coal-fired electric power plants, factories and cars, are carried long distances in the atmosphere and return to earth as acidic rain, snow or fog.

Residents in the Northeastern U.S. and adjoining Canadian provinces contend that Midwestern power plants are the worst offenders. Those plants, they argue, should be required to install billions of dollars of new pollution-control equipment or switch to low-sulfur coal. But Midwestern utilities and their customers insist that they can't afford to pay the tab and shouldn't be singled out.

On the other hand, proposals to levy a small tax on electric bills in every region of the U.S. already are "raising the hackles" of governors "who don't look kindly on paying for alleged environmental woes caused and suffered somewhere else," says Carl E. Bagge, president of the National Coal Association, which opposes most control measures.

The Western perspective further complicates the issue. Evern Wall, president of West Associates, a group of nearly two dozen Western utilities, asserts that plants operated by his members tend to be more modern and cause less pollution than typical Eastern or Midwestern coal-fired facilities. "We feel we've already done our share to clean up, and our customers are paying for it," he says.

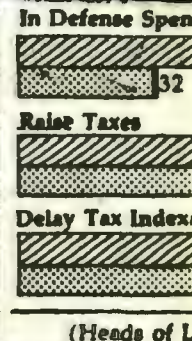
Cost estimates for the major bills circulating in Congress range from less than \$3 billion to \$8 billion annually. The sharp regional differences are reflected in the Senate and House committees that will take up the issue next month. The Senate Environment Committee, with its predominantly Northeastern and Western makeup, is leaning toward a financing program that requires more than a 50% reduction in sulfur emissions in 31 states by the 1990s and calls for Midwestern coal users to shoulder the largest chunk of the costs. The House Energy Committee, however, has a strong Midwestern membership and, at least at this point, appears determined to fight any acid-rain bill that doesn't call for substantial outlays by other sections.

With these divisions, Senate Majority Leader Howard Baker recently told utility executives he foresees "a general debate over a fairly long period of time."

Street Journal/Gallup survey of 312 executives. Results are based on telephone interviews with 317 chief executive officers selected from the 1,350 largest U.S. corporations, 303 chief executives from medium-sized companies and the heads of 202 small companies. The interviews were conducted during a three-week period in early December.

The survey shows that about six in 10 executives at large and medium-sized companies say the size of the federal budget deficit is the country's most worrisome economic problem. That's a switch from a year and a half ago, when about half the large-company executives considered high interest rates the biggest problem, and only about a third considered the deficit the biggest problem.

"The budget deficit is the key to business," says the president of a petroleum-transportation company. "Once we've gotten that in line, we'll be all right. The deficit was the major source of the problem in the first place." Says the chairman of a banking



change in the past April 1982 poll, near at large companies sufficiently concern

The executives 1 dies. The most popular eight in 10 executive programs. "More money than are c

Competition to Win. Splits Pentagon, Ang

By GERALD F. SEIN

Staff Reporter of THE WALL STREET JOURNAL

WASHINGTON — The Pentagon's great engine war is about to be settled.

The Air Force will decide in the next two weeks who will build a new generation of engines for its F-15 and F-16 jet fighters—one of the most-expensive and controversial hardware decisions in years. General Electric Co. and United Technologies Corp.'s Pratt & Whitney unit have been competing bitterly for the contract, which could be worth more than \$10 billion.

Many Pentagon officials believe the Air Force will decide to divide the work between the two companies. Others say Pratt & Whitney has so many competitive advantages that it will win all or most of the work. Pratt & Whitney now makes all the engines for the F-15 and F-16, which are the service's top jet fighters.

Regardless of what the Air Force decides, the competition has been unusual—even for the Pentagon, where the awarding of multimillion-dollar contracts is an everyday event. It has split defense officials, angered some in Congress and raised questions about whether either of the engines is good enough, compared with what the Soviets will have in the next few years. Lt. Gen. Lawrence Skantze, deputy chief of the Air Force staff, says

The Air Force, with its deliberations settled, it will award the work to the companies or split it. Officials say that both F have been asked to their costs if they will work or the whole

The Air Force successor to the current engine several years ago searches, the Air Force a more-powerful engine that would existing model but more durable.

The Air Force also encourage a heater contractors for the w

GE and United Technologies' Pratt & Whitney unit competing \$10 billion build a new

CODING FORM FOR APPLICATIONS FOR REGISTRATION/AMENDMENTS

File Symbol/Reg.No. 35900-3 PM 31 ☒ Action Code 301☒ 10 Descriptor (Amend/Resubmissions only) _____☒ 05 Intrastate Call-in ☐ (Y) Yes ☒ 15 Child-resistant/
Packaging ☐ (C) Certification
☒ (N) No ☐ (S) Service Person☒ 20 Registration Type: ☐ (1) Conditional ☒ (2) Unconditional
☐ (R) Non-residential Use Only
☒ (N) Not Applicable☒ 25 Proposed Classification: ☒ 30 Final Classification:☐ (R) Restricted ☐ (R) Restricted
☒ (G) General ☐ (G) General ☒ (N) Not Classified☒ 35 Date on Application: ☒ 04 EPA Received Date: ☒ 40 Date Received by PM.
01/05/84 01/05/84 01/05/84
MO DAY YR MO DAY YR MO DAY YR☒ 80 Method of Support: ☒ 85 Certification Statement:
☐ (1) Cite-All ☒ (4) Not Applicable ☐ (1) Yes ☒ (3) Not Applicable
☐ (2) Alternate ☐ (5) Not Submitted ☐ (2) Not Submitted
☐ (3) Combined ☐ (6) Owner Submission
Reviews Requested: ☐ (7) Total Submission

RD

PM

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EF

DATE SENT	DUE DATE	DATE RETURNED

RESPONSE CODE	RESPONSE DATE
38	1-17-84

☒ 108 Status: Meeting on 1/5/84 triggered a re-review of previous submission☒ 115 FINAL Response ACTION: Code 38☒ 120 Response Date: 01/26/84
MO DAY YR75-DAY RESPONSE DUE DATE: ☐ (Y) Yes ☐ (N) No

-2-

or "General Ionics presents the first bacteriostatic water conditioner...." As previously indicated, this is not the only bacteriostatic water conditioner. For your information, enclosed is a copy of the labeling for "The Water Hill Bacteriostatic Sink Top Water Conditioner."

2. Delete the statement "General Ionics equipment is worthy to be part of the USS Nautilus and the USS Enterprise" and the picture beneath that statement.
3. Delete the seal with "FDA APPROVED...." This is also considered a stamp of approval or endorsement, which is not permitted by the Federal Government.

Submit five (5) copies of the revised color brochure and Homeowner's Manual for both of these products within six (6) months from the date of this letter.

Sincerely yours,

J. Lee
John S. Lee
Product Manager (3)
Disinfectants Branch
Registration Division (75-7670)

enclosures

BEST DOCUMENT AVAILABLE

26 JAN 1984

Ionics, Incorporated
3039 Washington Pike
P.O. Box 99
Bridgeville, PA 15107

Attention: Walter J. Polens
Vice President

Gentlemen:

Subject: General Ionics Model IQ1240B
Bacteriostatic Water Conditioner
EPA Registration No. 35900-9
General Ionics Model IQ0820B
Bacteriostatic Water Conditioner
EPA Registration No. 35900-3 ✓

As agreed upon in the meeting held in my office on January 5, 1984, we have reconsidered the comments made in our letters dated December 7, 1983, regarding the homeowner's manual and the color brochure for sales personnel for these two products. The following comments resulted from this re-review of the referenced labeling:

- a. The Homeowners Manual was accepted with the provision that the manual would be revised and submitted to us prior to releasing the product for shipment bearing the amended labeling. However, we will allow you a period of up to six (6) months from the date of this letter to use up your existing supply of manuals before you will be required to use the manual as revised in accordance with our previous letter. That is, on page 10, line 3, change "...of a raw water supply..." to read "...of a tap water supply..." or "...of a municipally treated water supply...."
- b. The color brochure is being accepted at this time, with the understanding that you make the requested labeling changes, as indicated below, and submit the revised brochure within six (6) months from the date of this letter. (We are allowing you up to six (6) months to use up your existing supply of color brochures before you will be required to use the fully corrected brochure.)
 1. Revise the first statement "General Ionics presents the only EPA registered bacteriostatic water conditioner..." to read "General Ionics presents a bacteriostatic water conditioner..."

GENERAL IONICS Model IQ Bacteriostatic

METER-CONTROLLED FULLY AUTOMATIC STAINLESS STEEL WATER CONDITIONER

General Ionics presents the only EPA-registered Bacteriostatic Water Conditioner that not only softens municipally-treated water but also inhibits the growth of bacteria within the filter media bed. Additionally, the Model IQ — the unit with a brain — features state-of-the-art Metered Regeneration Control that provides salt savings of up to 40% over conventional timers.

The Model IQ Control monitors the conditioned water you use, and then initiates a regeneration cycle only when the ion exchange mineral is near exhaustion.

With the IQ Regeneration Control there is no need for "vacation" or

"guest" switches. This "brain" automatically meters any increase or decrease in water usage, and therefore regenerates only when necessary. As a result, you realize savings three ways: (1) salt consumption, (2) water usage, and (3) sewage taxes.

The General Ionics Model IQ Bacteriostatic Water Conditioner gives you absolutely carefree convenience and reliable performance, **plus** the unique polishing of your water with the silver-impregnated activated carbon that removes objectionable tastes and odors.

The Water Conditioner with a brain gives you all these advantages:

- Bacteriostatic feature inhibits

growth of bacteria within filter media bed while removing odors and tastes

- Meter-controlled regeneration for big savings
- Corrosion-resistant 6-cycle bronze control valve for trouble-free operation
- Beautifully polished chrome/nickel stainless steel mineral tank with a limited lifetime warranty
- High-density polypropylene brine tank with a 5-year limited warranty
- High-capacity S-759 resin for superior hardness removal as well as high recovery rates during regeneration

GENERAL IONICS — THE MAGIC NAME IN WATER CONDITIONING SINCE 1947

SPECIFICATION	MODEL NUMBER		
	IQ 0820-B	IQ 1240-B	IQ 1690-B
Capacity (Grains)	20,000	40,000	90,000
Tank Size — Diameter by Height (Inches)	8 x 51	12 x 59	16 x 67
Salt Storage Capacity (Pounds)	250	200	400
Brine Tank Size — Diameter by Height (Inches)	18 x 30	18 x 30	24 x 40

GENERAL IONICS EQUIPMENT IS WORTHY TO BE A PART OF THE USS NAUTILUS AND THE USS ENTERPRISE



ACCEPTED
by EPA Letter Dated



IONICS
IONICS, INCORPORATED

MANUFACTURERS OF GENERAL IONICS WATER CONDITIONERS
P.O. BOX 99 • BRIDGEVILLE, PA 15017 (PITTSBURGH DISTRICT)
INTERNATIONAL WATER CONSULTANTS AND EQUIPMENT MANUFACTURERS
MEMBER WATER QUALITY ASSOCIATION

JAN 26 1984

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.

35900-3



BACTERIOSTATIC



GENERAL IONICS Model IQ Bacteriostatic

METER-CONTROLLED FULLY AUTOMATIC STAINLESS STEEL WATER CONDITIONER

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The Water Conditioner with a brain gives you all these advantages:

- Bacteriostatic feature inhibits

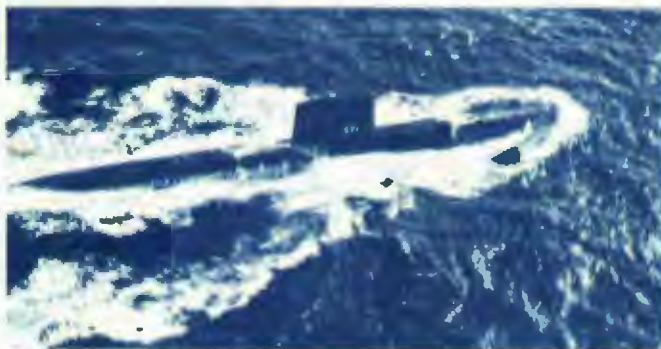
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GENERAL IONICS EQUIPMENT IS WORTHY TO BE A PART OF THE USS NAUTILUS AND THE USS ENTERPRISE



IONICS
IONICS, INCORPORATED

MANUFACTURERS OF GENERAL IONICS WATER CONDITIONERS
P.O. BOX 99 • BRIDGEVILLE, PA 15017 (PITTSBURGH DISTRICT)
INTERNATIONAL WATER CONSULTANTS AND EQUIPMENT MANUFACTURERS
MEMBER WATER QUALITY ASSOCIATION





revised 7/13/83

Record Number 109193

Reference Number 12

Input Date _____

CODING FORM FOR APPLICATIONS FOR REGISTRATION/AMENDMENTS

File Symbol/Reg.No. 35900-3 PM 31 [8] Action Code 300

[10] Descriptor (Amend/Resubmissions only) _____

[05] Intrastate Call-in ☐ (Y) Yes [15] Child-resistant/☐ (C) Certification Packaging

☒ (N) No ☐ (S) Service Person

[20] Registration Type: ☐ (1) Conditional ☒ (2) Unconditional ☐ (3) Non-residential Use Only

☒ (N) Not-Applicable

[25] Proposed Classification: [30] Final Classification:

☐ (R) Restricted ☐ (R) Restricted ☐ (N) Not Classified
☐ (G) General ☐ (G) General

[35] Date on Application:

1/0/2 5/8 3
MO DAY YR

[04] EPA Received Date:

1/0/2 7/8 3
MO DAY YR

[40] Date Received by PM:

1/0/2 7/8 3
MO DAY YR

[80] Method of Support:

[85] Certification Statement:

☐ (1) Cite-All ☒ (4) Not Applicable ☐ (1) Yes ☒ (3) Not Applicable
☐ (2) Alternate ☐ (5) Not Submitted ☐ (2) Not Submitted
☐ (3) Combined ☐ (6) Owner Submission

Reviews Requested: ☐ (7) Total Submission

RD
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DATE SENT	DUE DATE	DATE RETURNED

RESPONSE CODE	RESPONSE DATE
38	12-1-83

[108] Status: _____

[115] FINAL Response ACTION: Code 38

[120] Response Date

1/2/0 7/8 3
MO DAY YR

75-DAY RESPONSE DUE DATE: ☐ (Y) Yes ☐ (N) No

ATTACHED NOTIFICATION

TO: PH File Room
FROM: ³¹ REG. SUPPORT BR.

21452

EPA REG. NO. 35900-3
COMPANY NAME _____

NO NEW LABEL ☒

NEW LABEL ATTACHED _____


NEW CSF ATTACHED _____

.....
☒ THIS IS AN ADDITIONAL BRAND NAME

_____ THIS IS A CSF PERMITTED UNDER PR NOTICE 88-6

_____ THIS IS A LABEL CHANGE PERMITTED UNDER PR NOTICE 88-6

.....
☒ THIS WAS SENT TO SIG FOR CODING AND/OR MICROFICHING
_____ FILE IN JACKET

(A)  NOTIFICATION	United States Environmental Protection Agency Office of Pesticide Programs (H7505C) Washington, DC 20460 Application for Pesticide:	<input type="checkbox"/> Registration <input type="checkbox"/> Amendment <input checked="" type="checkbox"/> Other	OPP Identifier Number <div style="font-size: 1.5em; font-weight: bold; color: red;">165872</div>
--	---	--	---

Section I

1. Company/Product Number 35900-3	2. EPA Product Manager JOHN H. LEE	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) GENERAL IONICS MODEL IQ 0820 B BACTERIOSTATIC WATER CONDITIONER	PM# PM-31	
5. Name and Address of Applicant (Include ZIP Code) IONICS, INCORPORATED P.O. BOX 99 3039 WASHINGTON PIKE BRIDGEVILLE, PA 15017 <input type="checkbox"/> Check if this is a new address		6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____

Section II

<input type="checkbox"/> Amendment - Explain below <input type="checkbox"/> Resubmission in response to Agency letter dated _____ <input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____ <input type="checkbox"/> "Me Too" Application. <input type="checkbox"/> Other - explain below.
---	---

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

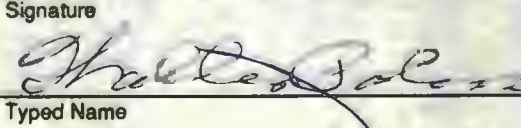
ADDITIONAL BRAND NAME REQUEST

GENERAL IONICS MODEL EE 0820 B BACTERIOSTATIC WATER CONDITIONER

Section III

1. Material This Product Will Be Packaged In:			
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No If "Yes," Unit Package wgt. _____ No. per container _____	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No If "Yes," Package wgt. _____ No. per container _____	2. Type of Container <input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
* Certification must be submitted.			
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container	4. Size(s) of Retail Container	5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner In Which Label Is Affixed To Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled <input type="checkbox"/> Other (_____)			

Section IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name WALTER J. POLENS	Title VICE PRESIDENT	Telephone No. (Include Area Code) (412) 343-1040
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature 	3. Title VICE PRESIDENT	
4. Typed Name WALTER J. POLENS	5. Date MAY 14, 1992	

Paperwork Reduction Act Notice and Instructions

Paperwork Reduction Act Notice

Public reporting burden for this collection of information is estimated to average of 0.85 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

Instructions

General

This form is to be used for all applications for new and amended registrations for pesticide products.

In order to process an application for new registration submitted on this form, the following material must accompany the application:

1. Offer to Pay Statement (EPA Form 8570-22, -23, or -24). (If not exempted by 40 CFR 162.9-1(b).)
2. Confidential Statement of Formula (EPA Form 8570-4).
3. Five copies of draft labeling.
4. Three copies of any data submitted.

Submission of Labeling - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8 1/2 x 11 inch paper or as a mockup of the proposed label. If prepared as a mockup it should be constructed in such a way as to facilitate storage in an 8 1/2 x 11 inch file. Mockup labels significantly smaller than 8 1/2 x 11 inches should be mounted on 8 1/2 x 11 inch paper for submission.

Submission of Data - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

Specific

Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Section I, III, and IV must be completed by the applicant. For applications submitted in connection with amended registration actions, Section I, II, and IV must be completed by the applicant.

Block A - Check the appropriate action for which you are submitting this form.

Section I - This Section must be completed for both Registration and Amended Registration actions.

1. **Company/Product Number** - Insert your company number, if one has been assigned. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If application is for an amendment, insert the registration number of the product.
2. **Date** - Fill in the appropriate date.
3. **Product Manager** - If known, fill in the name and number of the Product Manager.
4. **Proposed Classification** - Specify the proposed classification for this product.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters.

An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.

6. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.

Amendment Information

Section II - This Section must be completed for all applications submitted in connection with Amended Registration.

1. **Subject of Amendment** - Check the appropriate block, and provide a brief explanation of the purpose(s) for the amendment, such as: "the addition of a site, pest, or crop"; "to change inert ingredient"; "general label revisions of precautionary statements," etc.

Packaging and Container Information

Section III - This Section must be completed for all applications submitted in connection with New Registration.

1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Specify the net contents of all retail containers for your product.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicate the method product labeling is attached to retail container.

Contact Point

Section IV - This Section must be completed for all Registration and Amended Registration applications.

- 1-5. Self-explanatory.
6. EPA Use Only.



IONICS
IONICS, INCORPORATED

P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE 412-343-1040 FAX 412-257-1270

May 14, 1992

Document Processing Desk
Office of Pesticide Programs H7504C
U.S. Environmental Protection Agency
401 M Street SW
Washington, D.C. 20460-0001

Subject: Additional Brand Name Request (2)

Dear Sir:

In accordance with my telephone conversation of May 6, 1992 with your Mr. Valdis Goncarous, please find enclosed two (2) Application For Pesticide: Other, Notification. This is for two (2) Additional Brand Name Request for our EPA registered product General Ionics Model IQ0820B Bacteriostatic Water Conditioner (EPA Reg. No. 35900-3).

Please date stamp the yellow applicant copy of this application form and return in the enclosed self-addressed envelope to Ionics, Inc., as an acknowledgment.

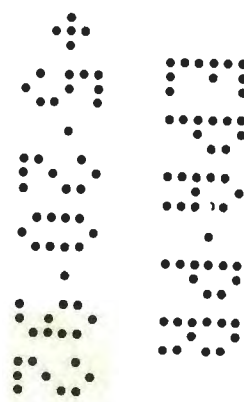
If there are any questions concerning this, please contact me.

Very truly yours,

IONICS, INCORPORATED


Walter J. Polens
Vice President

Enclosures
WJP/ml



07 DEC 1983

Ionics Incorporated
3039 Washington Pike
P.O. Box 99
Bridgeville, PA 15017

Attention: Walter J. Polens

Gentlemen:

Subject: General Ionics Model IQ0820B
Bacteriostatic Water Conditioner
EPA Registration No. 35900-3
Application Dated October 25, 1983

The amendment referred to above, submitted in connection with registration under FIFRA, is acceptable provided that you make the labeling change indicated below, and submit the requested document before you release the product for shipment bearing the amended labeling:

In the Homeowner's Manual on page 10, line 3, revise "...of a raw water supply..." to read "...of a tap water supply..." or "...of a municipally treated water supply...."

For our records please submit a copy of the Industry Standard referred to on the WQA gold seal.

Submit five (5) copies of the revised final printed Homeowner's Manual before you release the product for shipment.

A stamped copy of the unit label, shipping carton label, Homeowner's Manual installation instructions booklet and Questions and Answers brochure are enclosed for your records.

The color brochure for sales personnel is not acceptable. It should be revised in accordance with the following comments and resubmitted for our review and acceptance.

- a. Revise the first statement, "General Ionics presents the only EPA-registered bacteriostatic water conditioner..." to read "General Ionics presents a bacteriostatic water conditioner...." This is not a true statement because there are other registered bacteriostatic water conditioners.

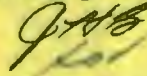
CONCURRENCES

SYMBOL ▶								
SURNAME ▶								
DATE ▶								

- b. Delete the statement "General Ionics equipment is worthy to be part of the USS Nautilus and the USS Enterprise." Also delete the pictures beneath that statement. These imply that this product is endorsed by the U.S. Navy. Such endorsements are not permitted by the Federal Government.

Submit five (5) copies of the revised final printed color brochure.

Sincerely yours,



John H. Lee
Product Manager (31)
Disinfectants Branch
Registration Division (TS-767C)

Enclosures

JLee:DCR-11957:RD.24:CM#2-246:557-7406:bje:12/05/83

LABEL TO BE AFFIXED TO OUTSIDE OF SHIPPING CARTON

**GENERAL IONICS®
MODEL IQ0820B
BACTERIOSTATIC WATER CONDITIONER
WITH HYGENE®**

Inhibits the growth of bacteria within the ion exchange softener
filter medium for municipally treated water.

CAUTION: KEEP OUT OF REACH OF CHILDREN

EPA Reg. No. 35900-3 EPA Est. No. 35900 PA 01

Storage of HYGENE® Material: Store in closed container which excludes moisture
and chemical fumes.

Active Ingredient: Silver as metallic 0.07%
Inert Ingredients: Cation Exchange Resin 80.00%
Gravel 13.33%
Activated Carbon 6.80%
Total Inert Ingredients 99.93%

Directions For Use: See Homeowner's Manual

Disposal Of Spent Media: Remove HYGENE® media from top of filter bed and place
in suitable container for disposing with trash.

Net Contents: One (1) Bacteriostatic Water Conditioner with HYGENE®

Another fine product by the manufacturers of General Ionics Water Conditioning Equipment



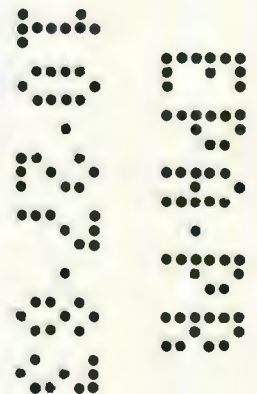
IONICS
IONICS, INCORPORATED

Routes 519 & 50 Bridgeville, Penna. 15017

ACCEPTED
with COMMENTS
in EPA Letter Dated:

DEC 07 1983

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
35900-3



LABELS TO BE AFFIXED TO MINERAL TANK



GENERAL IONICS® MODEL IQ0820B BACTERIOSTATIC WATER CONDITIONER WITH HYGENE®

Inhibits the growth of bacteria within the ion exchange softener filter medium for municipally treated water.

CAUTION: KEEP OUT OF REACH OF CHILDREN

EPA Reg. No. 35900-3 EPA Est. No. 35900 PA 01

Storage of HYGENE® Material: Store in closed container which excludes moisture and chemical fumes.

Active Ingredient: Silver as metallic	0.07%
Inert Ingredients: Cation Exchange Resin	80.00%
Gravel	13.33%
Activated Carbon	6.60%
Total Inert Ingredients	99.93%

Directions For Use: See Homeowner's Manual

Disposal Of Spent Media: Remove HYGENE® media from top of filter bed and place in suitable container for disposing with trash.

Net Contents: One (1) Bacteriostatic Water Conditioner with HYGENE®

Another fine product by the manufacturers of General Ionics Water Conditioning Equipment

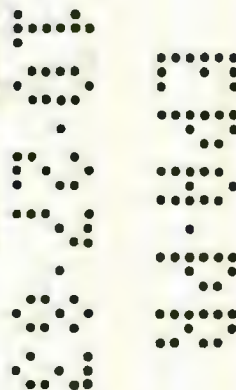


IONICS
IONICS, INCORPORATED

Route 540 Bridgeville, Penna. 15017
with COMMENTS
In EPA

DEC 07 1983

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the
registered EPA Reg. No.
35900-3





ACCEPTED
with COMMENTS
in EPA Letter Dated:

GENERAL IONICS BACTERIOSTATIC WATER CONDITIONERS

For use as a bacteriostatic agent,
registered under EPA Reg. No.

35900-3

First, what is a Bacteriostatic Water Conditioner?

A. A Bacteriostatic Water Conditioner is one which not only softens municipally treated water, but also inhibits the growth of bacteria within the ion exchange softening filter medium.

Is there a need to inhibit the growth of bacteria in potable (drinking) water?

A. Since potable water can, by law, contain a number of harmless bacteria indigenous to municipally treated water, the potential for a build-up or growth of these bacteria trapped within the ion exchange softening filter medium does exist.

Q. Why is there a build-up of bacteria in a water conditioning unit?

A. The low level of bacteria in the municipally treated water along with organic compounds normally present in a water supply become trapped in the filter media bed. After a period of time the filter bed contains a considerable number of bacteria and, in the presence of the organic compounds which become a source of nutrients for bacteria, the filter then becomes a breeding place for bacterial growth.

Q. What is in the Bacteriostatic Water Conditioner that inhibits the growth of bacteria within the filter medium?

A. The inhibiting agent is HYgene—an Environmental Protection Agency Registered Bacteriostatic Water Filter Medium. It is the exclusive property of Ionics, Incorporated. Technically, HYgene is a silver-impregnated granular activated carbon. A layer of HYgene is placed on top (water inlet side) of the ion exchange softening resin inside the water conditioner. The top section of the filter bed is the area where excessive bacteria growth usually takes place, especially during non-flow periods when the water is not in use, such as overnight or when the unit is unused during vacation periods. Bacterial level in ion exchange resins is a transitory phenomenon which is markedly decreased after a period of flow or a regeneration cycle.

Q. What is the expected life of the HYgene Bacteriostatic Water Filter medium contained in the General Ionics Water Conditioning Unit?

A. The HYgene medium should be replaced in accordance with water conditioner model size as follows:

Softening Capacity	Tank Diameter	HYgene Content	Bacteriostatic Medium Life	Family of 4
20 Kg.	8 inch	2 lb.	75,000	1 year
40 Kg.	12 inch	4 lb.	150,000	2 years
90 Kg.	18 inch	9.2 lb.	345,000	4 1/2 years

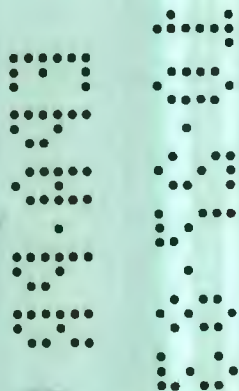
Q. Are there any Environmental Protection Agency restrictions that I should know?

A. There are no restrictions or precautions for your concern. The EPA has, however, registered the General Ionics Bacteriostatic Water Conditioners for use on treated municipally supplied tap water, which precludes its use on well water.

**QUESTIONS
&
ANSWERS
ABOUT**



**GENERAL IONICS
BACTERIOSTATIC
WATER
CONDITIONERS**



IONICS

IONICS, INCORPORATED

P.O. BOX 99 • BRIDGEVILLE, PA. 15017

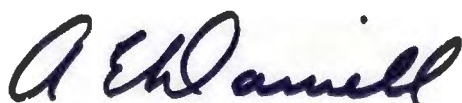
INTERNATIONAL WATER CONSULTANTS AND
EQUIPMENT MANUFACTURERS • MEMBER WATER
QUALITY ASSOCIATION

Congratulations

Ionics, Incorporated welcomes you to a new, carefree way of life with conditioned water. You can take pride and satisfaction knowing that you own the very best.

We are proud that you have selected the General Ionics deluxe quality Water Conditioner for your home. Your sound judgment is supported by the wide acceptance received for these units throughout the world. More and more quality conscious homeowners are purchasing General Ionics Water Conditioning equipment because of its superior performance and its premium quality workmanship.

The following pages of this booklet will introduce you to your new General Ionics Water Conditioner by explaining operation, care and maintenance. In addition, the booklet provides recommendations for getting the very best performance from your unit as well as answers to commonly asked questions.



Chairman of Board and
Chief Executive Officer
Ionics, Incorporated



General Information

Your General Ionics Water Conditioner is completely automatic. It will provide an abundance of conditioned water with just an occasional addition of salt to the brine tank when the salt reaches the "add salt" level. Your unit was thoroughly tested at the factory before shipping, and again at the time of installation.

The automatic timer is set to "regenerate" your water conditioner at night while you are sleeping. From experience, this is the best time because your water demand is lowest then and regeneration will not interfere with baths, washing clothes, etc. However, unconditioned water is available from all faucets during the regeneration cycle. With the General Ionics Water Conditioner you are never without water.

It is a good idea to wipe the unit occasionally and then apply a good coat of wax. This procedure will keep your water conditioner looking bright and clean for a lifetime.

In case some problem should arise, you can manually by-pass the unit by throwing one lever (see illustration on page 5). Then call your authorized General Ionics dealer. He has been trained in all phases of maintenance and repair work and will have the unit back in operation quickly. If there is not a General Ionics dealer in your vicinity, then contact another reliable water conditioning firm. Failing that, please write directly to the factory: Ionics, Incorporated, P.O. Box 99, Bridgeville, Pennsylvania 15017, Attention: Service Department.

NOTE: Whenever you correspond with the factory, be sure to include the model and serial number written on the inside back cover of this booklet. Explain the problem as best you can. With this information factory technicians can handle the problem promptly with little chance of error.

Regeneration

Your General Ionics Water Conditioning unit consists of a tank filled with a premeasured amount of a special mineral called S-759, formulated especially for General Ionics equipment. On top of the tank is the control valve/timer, which works on the same principle as an electric clock. Alongside the unit is a storage tank which holds the salt and brine for the regeneration cycle.

Regeneration means recharging or recleaning the special S-759 mineral. It is important to know that the entire cycle is automatic and you will have nothing to do with it. The following steps are for your own enlightenment. . . and to demonstrate the thoroughness of the automatic cycle: 1. Backwashing, which reverses the action of the water, throws off the sediment (called turbidity) that has been filtered out of the water, and flushes it down the drain. 2. Salt, as brine, is injected into the unit to clean and revitalize the S-759 mineral. (The amount of salt used is controlled by a float valve, which operates the same as the float in the water tank of your toilet.) 3. Slow rinse. 4. Fast rinse. 5. Valve automatically returns to the service position to again supply you with good, conditioned water.

What Salt To Use

Salt is your water conditioner's fuel. Using the right fuel is as important here as it is to get the best performance from your car. It is strongly recommended to use only nugget or pellet type salt in your water conditioner. This type of salt is pure and free of undesirable insolubles. Nugget or pellet type water conditioner salt is available from your General Ionics dealer.

NOTE: Common rock salt is NOT recommended because much of it contains insolubles. The continued use of common rock salt will necessitate more frequent cleaning of the brine tank, or worse, it may cause a malfunction of the valving. However, specially processed water conditioner rock salt, as handled by your local dealer, may be used.

When To Add Salt

The brine tank has a capacity up to 250 lbs. of nugget or pellet salt. You can add salt whenever it is most convenient for you, but it is important to replenish the supply before the pellets reach the "add salt" level indicated by the label on the salt storage tank.

Bridging Or Caking

The salt platform in your brine tank has been engineered to eliminate salt bridging or caking. However, under certain atmospheric conditions these circumstances can occur and will prevent the salt from coming in contact with the water level. When your water seems to be hard, check the salt in the storage tank. If it appears to be bridging or caking, break it up with a short wooden stick. In doing so, be careful not to probe the full depth of the brine tank because you may damage the salt platform.

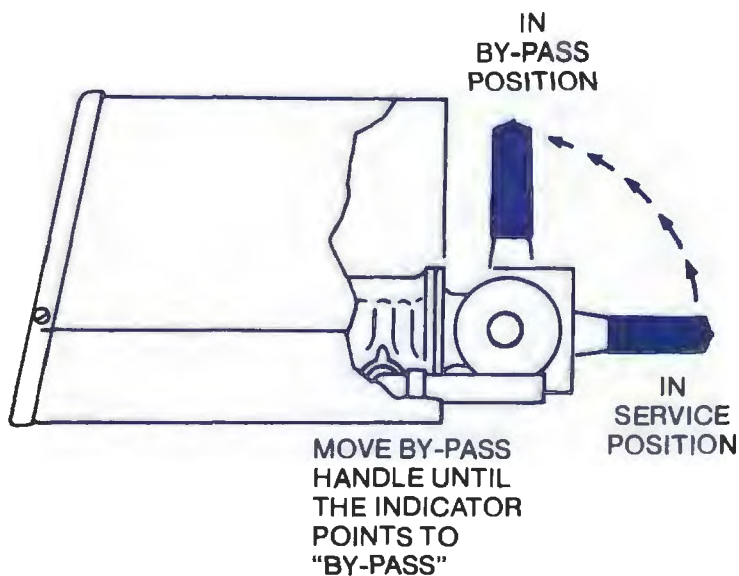
Bacteriostatic — An Ionics Exclusive

If your General Ionics Water Conditioner is an Environmental Protection Agency (EPA) Registered Bacteriostatic model, you have two unique added features. First, this unit inhibits the growth of bacteria within the S-759 ion exchange filter media bed. Second, it reduces and in many cases completely eliminates organic tastes, odors and colors from the water.

Inside the Bacteriostatic model water conditioner a layer of HYgene™ silver-impregnated activated carbon (EPA Registered Bacteriostatic Water Filter Media) is placed on top of the S-759 mineral. The silver acts as the inhibiting agent while the activated carbon adsorbs objectionable tastes, odors and colors.

EPA has restricted the Bacteriostatic models for use only on treated municipally supplied tap water, which precludes its use on well water.

MODELS IQ AND EE



By-Pass Instruction

In case any problem should occur that cannot be immediately resolved, it is recommended to manually by-pass the unit as shown and call your authorized General Ionics dealer.



Model IQ Special Features

Meter-Controlled Regeneration

The Model IQ control minimizes salt usage and water waste by accurately monitoring the conditioned water and then initiating a regeneration only when the S-759 mineral is near exhaustion. Six-cycle downflow brining assures accurate salting while the adjustable time regeneration program uses the minimum amount of water required per cycle.

In service a mechanical meter accurately monitors water usage. This feature eliminates the costly wasted capacity due to premature regenerations.

Vacation Periods

There is no need to be concerned about disconnections or adjustments on your Model IQ Water Conditioner before leaving your home for long periods of time. When no water is being used, the "brain" will simply remain idle for that period of time and be ready to monitor water usage when you return home.

High Usage Demand/Weekend Guests

The Model IQ Water Conditioner's "brain" will automatically recognize the increase in water usage and regenerate before running out of conditioner water. Unpredictable water demand is never a problem with the General Ionics Model IQ.

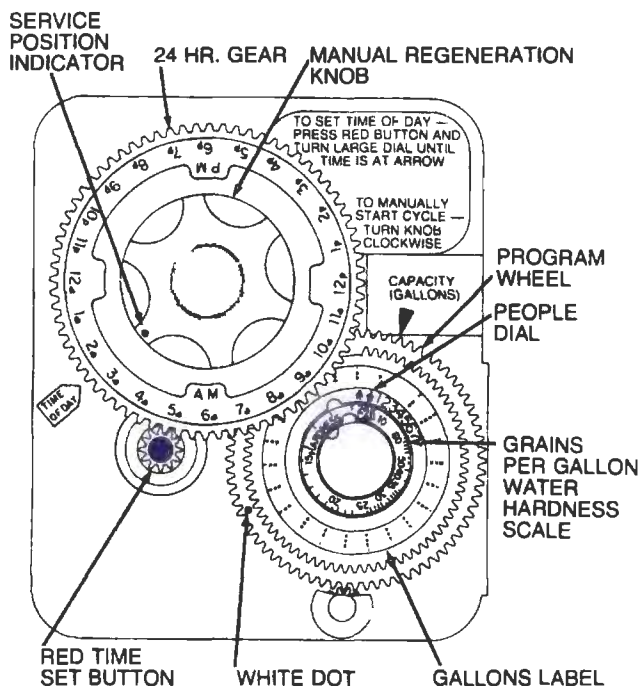
How To Set The Time Of Day

If you should have a power failure or want to adjust for Daylight Savings Time, follow these instructions:

Press and hold in the red button to disengage the drive gear.

Turn the large gear until the actual time of day is opposite the time of day pointer.

Release the red button to engage the drive gear.



How To Manually Regenerate Your Water Conditioner At Any Time

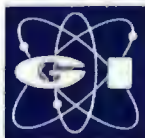
Turn the manual regeneration knob clockwise.

This slight movement of the manual regeneration knob engages the program wheel and starts the regeneration program.

The black center knob will make one revolution in the following three hours and stop in the position shown in the drawing.

Even though it takes three hours for this center knob to complete one revolution, the regeneration cycle of your unit might be set for only one-half of this time.

In any event, conditioned water may be drawn after rinse water stops flowing from the water conditioner drain line.



Model EE Special Features

Energy Efficient Control

This fully automatic six-cycle valve with 12-day timer schedules regenerations at preset intervals. The day and the hour for regeneration, as well as the salt dosage, have been set at the time of installation by the installer. These settings have been carefully calculated according to your family needs and to get the maximum recovery of the resin while minimizing water usage. **Do Not Change These Settings Without First Consulting Your Dealer.**

Vacation Periods

Why allow your water conditioner to continue regenerating while you are on vacation? It would be a waste of salt to recharge an already charged mineral bed. With your Energy Efficient General Ionics Model EE Water Conditioner, vacation time has been taken into account. Simply move the by-pass valve lever (see illustration on page 5 of this manual) until the indicator points to "by-pass". By doing so, the unit will continue to go through the preset regeneration cycles, but actually it will not regenerate. When you return home, move the by-pass valve lever back to the "service" position and you will again have conditioned water as before.

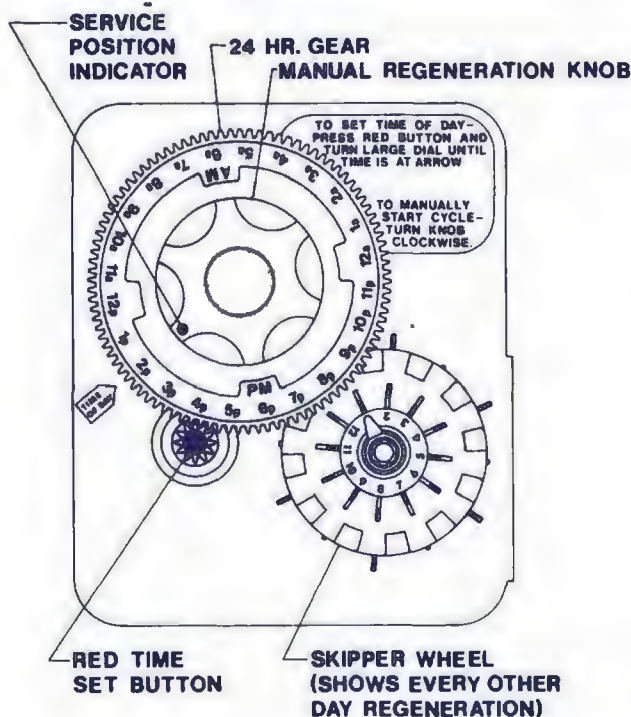
High Usage Demand/Weekend Guests

As mentioned previously, your General Ionics Model EE unit is set for your own needs. Higher than normal usage such as weekend guests will naturally place a greater demand for conditioned water on the unit. The method for manually regenerating the unit is covered on page 9. This "extra" regeneration will not interfere with the regular programmed cycle.

How To Set The Time Of Day

If you should have a power failure or want to adjust for Daylight Savings Time, follow these instructions:

Press and hold in the red button to disengage the drive gear.



Turn the large gear until the actual time of day is opposite the time of day pointer.

Release the red button to engage the drive gear.

How To Manually Regenerate Your Water Conditioner At Any Time

Turn the manual regeneration knob clockwise.

This slight movement of the manual regeneration knob engages the program wheel and starts the regeneration program.

The black center knob will make one revolution in the following three hours and stop in the position shown in the drawing.

Even though it takes three hours for this center knob to complete one revolution, the regeneration cycle of your unit might be set for only one-half of this time.

In any event, conditioned water may be drawn after rinse water stops flowing from the water conditioner drain line.

Questions And Answers

Q. What is water conditioning?

- A. Water conditioning is that branch of engineering that determines the chemical characteristics of a raw water supply, as it enters your home, and treats these characteristics so as to provide water more suitable and economical for household use.

Q. Why is it essential to improve water quality?

- A. Beyond being an absolute necessity of life, water is an outstanding cleaning agent. The trouble is that nature does a lot of things with water long before you have a chance to use it in your laundry or at your kitchen sink. You get it, as it were, second hand. Therefore, improving your water quality by water conditioning is just as essential as any other home appliance.

Q. Does the conditioned water have a "different" taste?

- A. Taste is difficult to define as no two people have the same sense of taste. A water conditioner will remove certain minerals and turbidity from the water, giving you a cleaner, better tasting water.

Q. Will conditioned water give a cleaner, brighter wash?

- A. Yes. For best results, you should use the proper amount of laundering agent. Keep in mind a 60 to 80% soap saving can be achieved with conditioned water. Learn to use less laundering agent because none of the cleansing compound will be wasted as in hard water cleaning. The amount of laundering agent you use depends on: (1) its effectiveness, (2) the volume and temperature of water, (3) the size of the wash load, and (4) the type and amount of dirt and grime.

Q. What effect will conditioned water have on plumbing?

- A. Before the water was conditioned, the hard water caused a scale build-up in the hot water pipes and water heater. Scale acts as an insulating material. In the water heater, scale reduces heat transmission, wastes fuel and often causes heating coil and tube failure. The installation of a water conditioner not only prevents further scale formation but will gradually remove previously formed scale deposits. A recent study indicates that softened water offers a saving of 23% in energy cost in the operation of a hot water heater.

Q. Are the minerals which a conditioner removes from hard water essential to health?

- A. No. The quantity of minerals found in hard water are not essential to good health.

Q. Is the sodium in softened water harmful to people on restrictive diets?

- A. Much depends on the strictness of the diet itself.

When the patient is on an extremely restrictive diet, he should drink neither hard nor softened water. Under these conditions he should have demineralized water, distilled water, or water known to be free of sodium for drinking and for the cooking of foods. Such patients are commonly hospitalized.

In establishing a salt-free diet for patients, physicians should not overlook the fact that even hard water may contain appreciable amounts of sodium. To determine the amount a complete analysis of the water is necessary.

Q. How much sodium is added to softened water?

- A. Each grain per gallon (GPG) hardness removed adds 7.875 milligrams (mg) of sodium to a liter of water, which is approximately one quart. The average daily sodium intake of an adult individual is 3,000 to 4,000 milligrams and the average fluid intake is 1.6 to 2.0 liters per day. A liter is slightly more than four 8-ounce glasses of water. Two liters per day or 8.4 eight-ounce glasses of water amounts to a total sodium intake from a source of softened 8 GPG water of 125.16 milligrams. This is approximately 3% of the average daily sodium intake.

There is another way to answer this question, and that depends on the hardness of your raw water. The following table shows the additional amount of sodium consumed by drinking ONE quart of softened water.

Initial Water Hardness

Sodium Added By Softening

5 Grains/Gallon
10 Grains/Gallon
20 Grains/Gallon
40 Grains/Gallon

37.5 Milligrams/Quart
75.0 Milligrams/Quart
150.0 Milligrams/Quart
300.0 Milligrams/Quart

Q. How does this sodium content of conditioned water compare to sodium found in common foods?

- A. The data in the following table demonstrate the usual range of sodium in common foods.

Food	Amount	Milligrams Of Sodium
Milk	2 Cups	226
Bread	2 Slices	322
Corn Flakes	1 Ounce	260
Tomato Juice	4 Ounces	504
Chili	1 Cup	1,194
Tomato Soup	1 Cup	932
Beef Broth	1 Cup	1,152
Frankfurter	1 Medium	610
Hamburger (Fast Food)	1/4 Pound	1,510
Catsup	1 Tablespoon	204
Canned Baked Beans	3/4 Cup	1,130
Canned Asparagus	1/2 Cup	560
Frozen Peas	1/2 Cup	295
Cottage Cheese	4 Ounces	457
Parmesan Cheese	1 Ounce	528
Pretzels	1/4 Pound	1,925

It is important to note that about 2/3 of the daily water intake of any individual is through food and only about 1/3 from water itself.

General Ionics Water Conditioner LIMITED WARRANTY

This should be kept in a safe place by the owner

GENERAL CONDITIONS

Ionics, Incorporated, Bridgeville, Pa., warrants that the General Ionics Water Conditioner to which this limited warranty applies is free from defects in material and workmanship. The attached limited warranty agreement card must be filled out, mailed to, and received by Ionics, Incorporated, within two (2) weeks of the date of installation of the equipment for this limited warranty to be effective.

This limited warranty is extended directly by the manufacturer to the owner, and is the sole warranty applicable. Any other warranties or guarantees, oral or written, expressed or implied, are not recognized.

LIMITED LIFETIME WARRANTY ON MINERAL TANK

This General Ionics Water Conditioning unit carries a limited warranty on the mineral tank. Any such mineral tank that becomes unusable because of leakage, corrosion, or rupture will be replaced or repaired at the option of Ionics, Incorporated. The defective tank must be returned to Ionics, Incorporated, transportation prepaid, within 30 days from date of failure for this limited warranty to be effective.

ELECTRICAL PARTS - LIMITED WARRANTY

Electrical components are warranted for a period of one (1) year of date of installation, provided the defective part is returned, prepaid to Ionics, Incorporated. Valve and/or control valve parts are warranted for a period of five (5) years from date of installation. Any such components found to be defective will be replaced or repaired, within five (5) years of date of installation, provided the defective part is returned, prepaid, to Ionics, Incorporated.

SALT STORAGE TANK - LIMITED WARRANTY

There is a five (5) year warranty on salt storage tank. Any such storage tank that becomes unusable because of leakage or corrosion will be replaced or repaired at the option of Ionics, Incorporated. The original tank must be returned to Ionics, Incorporated, transportation prepaid, within 30 days from date of failure for this limited warranty to be effective.

Salt Storage Tank components are warranted for a period of one (1) year of date of installation, provided the defective parts are returned prepaid to Ionics, Incorporated.

IMPORTANT

This booklet contains your Owner Limited Warranty Card. Be sure that it is filled in and mailed to the factory within two weeks of installation. Failure to do so will result in voiding the warranty.

Your General Ionics Dealer is...

SCOPE OF LIMITED WARRANTY

Under terms of this limited warranty, all tanks are replaced or repaired by Ionics, Incorporated, on the basis of F.O.B. manufacturer's plant. Transportation, labor, installation, and service costs are to the customer's account and are not covered by this limited warranty.

LIMITATIONS OF WARRANTY

This limited warranty shall be effective only if the Water Conditioner covered by the limited warranty is properly installed in accordance with installation and operating instructions furnished with the equipment by Ionics, Incorporated, and in accordance with local plumbing codes and ordinances.

This limited warranty shall be void if any part of the Water Conditioner has been subjected to accident, alteration, abuse, neglect, or freezing.

This limited warranty shall not be assignable by the original purchaser and applies only to the original equipment.

Model Number _____ Tank Number _____

Date Installed _____

Dealer _____

Address _____

Telephone _____



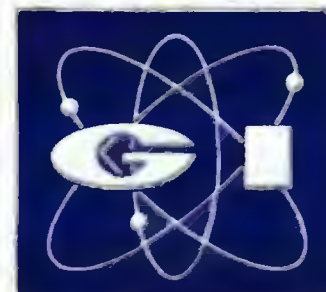
IONICS

IONICS, INCORPORATED

P.O. Box 99 • Bridgeville, PA 15017

HOMEOWNER'S MANUAL

GENERAL IONICS WATER CONDITIONER Model IQ and Model EE



ACCEPTED
with COMMENTS
in EPA Letter Dated:

DEC 07 1983

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.

35200-3



IONICS

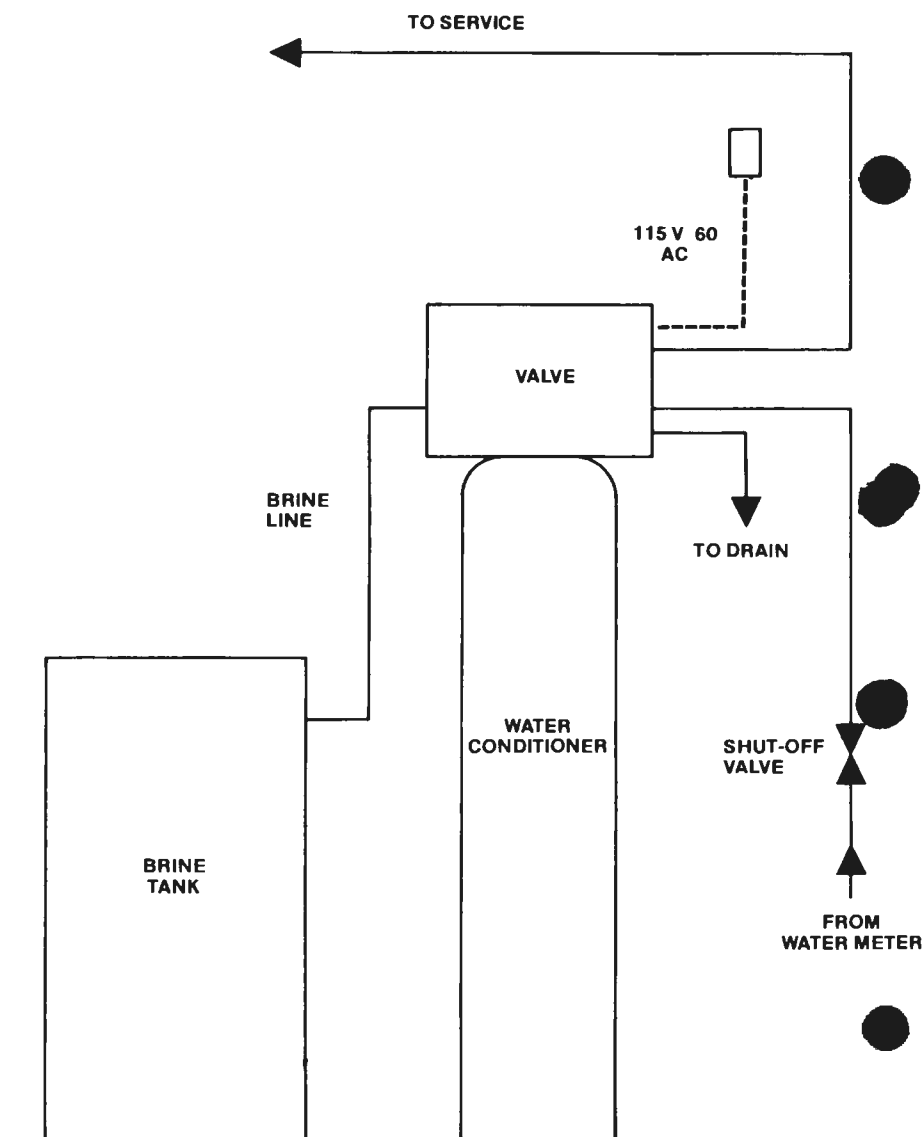
IONICS, INCORPORATED

P.O. Box 99
Bridgeville, PA 15017

INTERNATIONAL WATER CONSULTANTS AND
EQUIPMENT MANUFACTURERS • MEMBER
WATER QUALITY ASSOCIATION

IONICS, INCORPORATED

TYPICAL INSTALLATION FOR GENERAL IONICS BACTERIOSTATIC WATER CONDITIONER



INSTALLATION INSTRUCTIONS

GENERAL CLASSIFICATION: It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

1. **Select Location**—The location selected must be convenient for drain facilities, electrical outlet and convenient for servicing and adding salt.
2. **Unpacking**—The Bacteriostatic Water Conditioner has been shipped complete in two cartons.
One carton contains the mineral tank which is preloaded with gravel bed, high capacity ion exchange resin and HYgene Bacteriostatic Water Filter Media. The control valve is mounted on top of this tank.
The second carton contains the salt storage tank and its components.
3. Turn main water supply off and drain system.
4. Cut the main supply line and remove approximately 6 inches of existing plumbing.
5. Remove control face plate and shroud. Place the mineral tank on the three plastic leveling legs and level.
6. Move bypass lever so indicator points to bypass position. Connect the main inlet line to the opening in the valve marked "In". Connect the house service line to the opening marked "Outlet". Connect drain line.
7. Turn main supply on. Customer will have tap water while installation is being completed.
8. Install salt storage tank. Assemble brine valve—connect brine line to control valve—add water to the salt storage tank. Add salt.
9. (a) Move bypass lever until indicator points to service position and then open a cold water faucet at kitchen sink or stationary tub to expel air. When there is a steady flow of water at the faucet, continue running for 15 minutes at flow rate indicated in Table I [Step 9 (a)].
(b) Press and hold the red button on the timer. This disengages the drive gear. Turn the black knob on the large cycle dial to backwash position to expell air compressed in the unit. When there is a steady flow of water at the drain, continue running for 10 minutes at flow rate indicated in Table I [Step 9 (b)].
(c) Again press and hold the red button to disengage the drive gear. Turn black knob and cycle dial to service position. Again open cold water tap at the kitchen sink or stationary tub. Continue running for 10 minutes at flow rate indicated in Table I [Step 9 (c)]. See note following Table I. Unit is now in service.

TABLE I

INSTALLATION FLOW RATES PRIOR TO IN-SERVICE USE

Softening Capacity	Step 9 (a) Service	Step 9 (b) Backwash	Step 9 (c) Service
20 Kg.	3 GPM/15 min.	1.5 GPM/10 min.	8 GPM/10 min.
40 Kg.	6 GPM/15 min.	3.0 GPM/10 min.	12 GPM/10 min.
90 Kg.	10 GPM/15 min.	7.0 GPM/10 min.	20 GPM/10 min.

NOTE: If flow rate in Step 9 (c) cannot be achieved due to low line pressure, run water a maximum flow until equivalent gallonage is reached.

TABLE II

LIFE EXPECTANCY OF HYGENE BACTERIOSTATIC MEDIA

Softening Capacity	Tank Diameter	HYgene Content	Bacteriostatic Medium Gallons	Family of 4
20 Kg.	8"	2 lb.	75,000	1 year
40 Kg.	12"	4 lb.	150,000	2 years
90 Kg.	16"	9.2 lb.	345,000	4.5 years

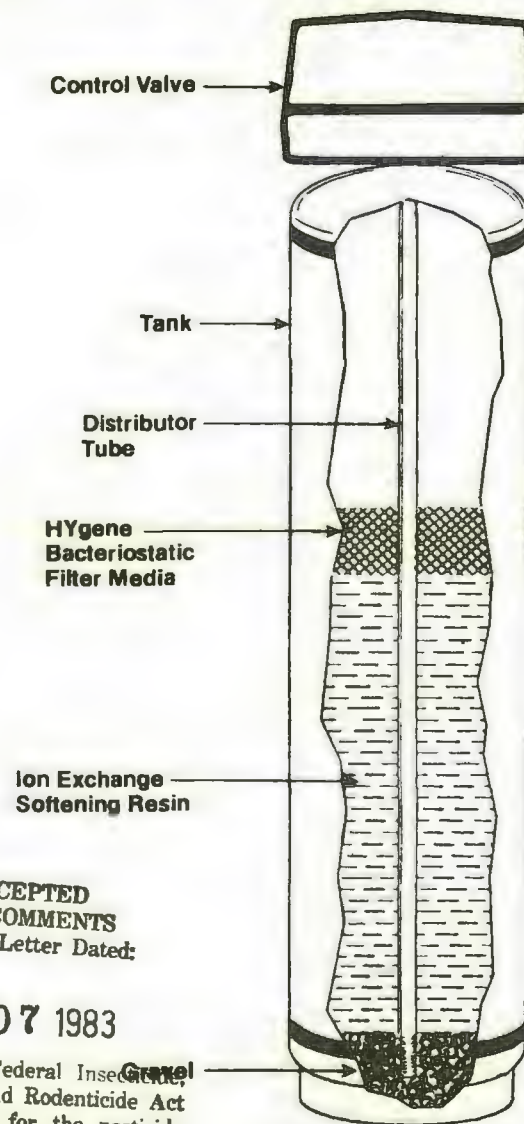
It is suggested that a water meter reading be noted at time of installation. Add to that reading the expected gallonage life of the Bacteriostatic medium from the above chart. Record what the water meter reading will be when replacement should be made.

Water meter reading at time of installation _____ Gallons

Expected life of Media (from above chart) + _____ Gallons

Water meter reading, media replacement _____ Gallons

GENERAL IONICS BACTERIOSTATIC WATER CONDITIONERS



ACCEPTED
with COMMENTS
in EPA Letter Dated:

DEC 07 1983

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.

3590-3



U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDE PROGRAM (TS-767)
WASHINGTON, D.C. 20460

APPLICATION FOR PESTICIDE:

☐ REGISTRATION
☒ AMENDMENT

A

Please read instructions
on reverse before com-
pleting.

SECTION I

1. COMPANY/PRODUCT NO. 35900-3 2. DATE 10/26/83 3. PRODUCT MANAGER John H. Lee (31) 4. PROPOSED CLASSIFICATION ☒ GENERAL ☐ RESTRICTED

5. NAME AND ADDRESS OF APPLICANT (Include ZIP Code)

Ionics, Incorporated
3039 Washington Pike
P.O. Box 99
Bridgeville, PA 15017

☐ CHECK IF THIS IS A NEW ADDRESS

6. PRODUCT NAME

General Ionics Model MIVSH-8 Bacteriostatic Water Conditioner

SECTION II

1. SUBJECT OF AMENDMENT

☐ RESUBMISSION IN RESPONSE TO AGENCY LETTER DATED _____

☐ FINAL PRINTED LABEL IN RESPONSE TO AGENCY LETTER DATED _____

☒ OTHER (explain below)

Change Product Name

From: General Ionics Model MIVSH-8 Bacteriostatic
Water Conditioner

To: General Ionics Model IQ0820B Bacteriostatic
Water Conditioner

Please Find Attached Revised Labeling

SECTION III

1. WILL THIS PRODUCT BE PACKAGED IN:

CHILD-RESISTANT PACKAGING ☐ YES ☐ NOUNIT PACKAGING ☐ YES ☐ NO

If YES, unit pkg. wt. _____ No. per container _____

WATER-SOLUBLE PACKAGING ☐ YES ☐ NO

If YES, pkg. wt. _____ No. per container _____

2. TYPE OF CONTAINER

☐ METAL☐ PLASTIC☐ GLASS☐ PAPER☐ OTHER (Specify) _____

3. LOCATION OF NET CONTENTS

☐ LABEL ☐ CONTAINER

4. SIZE(S) OF RETAIL CONTAINER

5. LOCATION OF LABEL DIRECTIONS

☐ ON LABEL☐ ON MATERIAL ACCOMPANYING PRODUCT

6. MANNER IN WHICH LABEL IS AFFIXED TO PRODUCT

☐ LITHOGRAPH☐ OTHER (Specify) _____☐ PAPER GLUED☐ STENCILED

SECTION IV

1. CONTACT POINT (Complete items directly below for identification of individual to be contacted, if necessary, to process this application).

NAME

Walter J. Polens, V.P., Ionics, Inc.

TITLE

Vice President

TELEPHONE NO. (Include Area Code)

(412) 343-1040

2. SIGNATURE

3. TITLE

4. TYPED NAME

Walter J. Polens

5. DATE SIGNED

10/25/83

6. DATE APPLICATION RECEIVED (Stamped)

INSTRUCTIONS

GENERAL

This form is to be used for all applications for new and amended registrations for pesticide products.

In order to process an application for new registration submitted on this form, the following material must accompany the application:

1. Offer to Pay Statement (EPA Form 8570-22, -23, or -24). (If not exempted by 40 CFR 162.9-1(b).
2. Confidential Statement of Formula (EPA Form 8570-4).
3. Five copies of draft labeling.
4. Three copies of any data submitted.

Submission of Labeling - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8 1/2 x 11 inch paper or as a mock-up of the proposed label. If prepared as a mock-up it should be constructed in such a way as to facilitate storage in an 8 1/2 x 11 inch file. Mock-up labels significantly smaller than 8 1/2 x 11 inches should be mounted on 8 1/2 x 11 inch paper for submission.

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BLOCK A - Check the appropriate action for which you are submitting this form.

Section I - This Section must be completed for both REGISTRATION and AMENDED REGISTRATION actions.

1. **Company/Product Number** - Insert your company number, if one has been assigned. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If application is for an amendment, insert the registration number of the product.
2. **Date** - Fill in the appropriate date.
3. **Product Manager** - If known, fill in the name and number of the Product Manager.
4. **Proposed Classification** - Specify the proposed classification for this product.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters.

An applicant NOT residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.

6. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company firm designations.

AMENDMENT INFORMATION

Section II - This Section must be completed for all applications submitted in connection with AMENDED REGISTRATION.

1. **Subject of Amendment** - Check the appropriate block, and provide a brief explanation of the purpose(s) for the amendment, such as "the addition of a site, pest, or crop"; "to change inert ingredient"; "general label revisions of precautionary statements", etc.

PACKAGING AND CONTAINER INFORMATION

Section III - This Section must be completed for all applications submitted in connection with NEW REGISTRATION.

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2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Indicate the location of the statement of net contents.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Direction** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicate the method product labeling is attached to retail container.

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- 1-5. Self-explanatory.



U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDE PROGRAM (TS-767)
WASHINGTON, D.C. 20460

APPLICATION FOR PESTICIDE:

☐ REGISTRATION
☒ AMENDMENT

A

Please read instructions
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pleting.

SECTION I

1. COMPANY/PRODUCT NO. 35900-3 2. DATE 10/26/83 3. PRODUCT MANAGER John H. Lee (31) 4. PROPOSED CLASSIFICATION ☒ GENERAL ☐ RESTRICTED

5. NAME AND ADDRESS OF APPLICANT (Include ZIP Code)

Ionics, Incorporated
3039 Washington Pike
P.O. Box 99
Bridgeville, PA 15017

☐ CHECK IF THIS IS A NEW ADDRESS

6. PRODUCT NAME

General Ionics Model MIVSH-8 Bacteriostatic Water Conditioner

SECTION II

1. SUBJECT OF AMENDMENT

☐ RESUBMISSION IN RESPONSE TO AGENCY LETTER DATED _____

☐ FINAL PRINTED LABEL IN RESPONSE TO AGENCY LETTER DATED _____

☒ OTHER (explain below)

Change Product Name

From: General Ionics Model MIVSH-8 Bacteriostatic
Water Conditioner

To: General Ionics Model IQ0820B Bacteriostatic
Water Conditioner

Please Find Attached Revised Labeling

SECTION III

1. WILL THIS PRODUCT BE PACKAGED IN:

CHILD-RESISTANT PACKAGING ☐ YES ☐ NO

UNIT PACKAGING ☐ YES ☐ NO

If YES, unit pkg. wt. _____ No. per container _____

WATER-SOLUBLE PACKAGING ☐ YES ☐ NO

If YES, pkg. wt. _____ No. per container _____

2. TYPE OF CONTAINER

☐ METAL

☐ PLASTIC

☐ GLASS

☐ PAPER

☐ OTHER (Specify) _____

3. LOCATION OF NET CONTENTS

☐ LABEL ☐ CONTAINER

4. SIZE(S) OF RETAIL CONTAINER

5. LOCATION OF LABEL DIRECTIONS

☐ ON LABEL

☐ ON MATERIAL ACCOMPANYING PRODUCT

6. MANNER IN WHICH LABEL IS AFFIXED TO PRODUCT

☐ LITHOGRAPH

☐ OTHER (Specify) _____

☐ PAPER GLUED

☐ STENCILED

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NAME

Walter J. Polens, V.P., Ionics, Inc.

TITLE

Vice President

TELEPHONE NO. (Include Area Code)

(412) 343-1040

2. SIGNATURE

3. TITLE

V.P.

4. TYPED NAME

Walter J. Polens

5. DATE SIGNED

10/25/83

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- 1-5. Self-explanatory.



U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDE PROGRAM (TS-767)
WASHINGTON, D.C. 20460

APPLICATION FOR PESTICIDE:

☐ REGISTRATION
☒ AMENDMENT

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☒ OTHER (explain below)

Change Product Name

From: General Ionics Model MIVSH-8 Bacteriostatic
Water Conditioner

To: General Ionics Model IQ0820B Bacteriostatic
Water Conditioner

Please Find Attached Revised Labeling

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If YES, unit pkg. wt. _____ No. per container _____

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If YES, pkg. wt. _____ No. per container _____

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☐ LABEL☐ CONTAINER

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5. LOCATION OF LABEL DIRECTIONS

☐ ON LABEL☐ ON MATERIAL ACCOMPANYING PRODUCT

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NAME

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TITLE

Vice President

TELEPHONE NO. (Include Area Code)

(412) 343-1040

2. SIGNATURE

3. TITLE

V.P.

4. TYPED NAME

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- 1-5. Self-explanatory.



U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDE PROGRAM (TS-767)
WASHINGTON, D.C. 20460

APPLICATION FOR PESTICIDE:

☐ REGISTRATION
☒ AMENDMENT

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☐ CHECK IF THIS IS A NEW ADDRESS

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SECTION II

1. SUBJECT OF AMENDMENT

☐ RESUBMISSION IN RESPONSE TO AGENCY LETTER DATED _____

☐ FINAL PRINTED LABEL IN RESPONSE TO AGENCY LETTER DATED _____

☒ OTHER (explain below)

Change Product Name

From: General Ionics Model MIVSH-8 Bacteriostatic
Water Conditioner

To: General Ionics Model IQ0820B Bacteriostatic
Water Conditioner

Please Find Attached Revised Labeling

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CHILD-RESISTANT PACKAGING ☐ YES ☐ NO

UNIT PACKAGING ☐ YES ☐ NO

If YES, unit pkg. wt. _____ No. per container _____

WATER-SOLUBLE PACKAGING ☐ YES ☐ NO

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2. TYPE OF CONTAINER

☐ METAL

☐ PLASTIC

☐ GLASS

☐ PAPER

☐ OTHER (Specify) _____

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☐ LABEL

☐ CONTAINER

4. SIZE(S) OF RETAIL CONTAINER

5. LOCATION OF LABEL DIRECTIONS

☐ ON LABEL

☐ ON MATERIAL ACCOMPANYING PRODUCT

6. MANNER IN WHICH LABEL IS AFFIXED TO PRODUCT

☐ LITHOGRAPH

☐ OTHER (Specify) _____

☐ PAPER GLUED

☐ STENCILED

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NAME

Walter J. Polens, V.P., Ionics, Inc.

TITLE

Vice President

TELEPHONE NO. (Include

(412) 343-1040

2. SIGNATURE

3. TITLE

V.P.

4. TYPED NAME

Walter J. Polens

5. DATE SIGNED

10/25/83

6. DATE APPLICATION RECEIVED (Stamped)

INSTRUCTIONS

GENERAL

This form is to be used for all applications for new and amended registrations for pesticide products.

In order to process an application for new registration submitted on this form, the following material must accompany the application:

1. Offer to Pay Statement (EPA Form 8570-22, -23, or -24). (If not exempted by 40 CFR 162.9-1(b).
2. Confidential Statement of Formula (EPA Form 8570-4).
3. Five copies of draft labeling.
4. Three copies of any data submitted.

Submission of Labeling - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8 1/2 x 11 inch paper or as a mock-up of the proposed label. If prepared as a mock-up it should be constructed in such a way as to facilitate storage in an 8 1/2 x 11 inch file. Mock-up labels significantly smaller than 8 1/2 x 11 inches should be mounted on 8 1/2 x 11 inch paper for submission.

Submission of Data - Data submitted in support of this application must be submitted in three copies. In order to facilitate review, each type of data submitted must be bound separately, and clearly identified on the front cover including the date submitted.

A copy of the application form and a copy of the label should be bound in each separate volume of the data.

ALL DATA FOR WHICH CLAIMS OF CONFIDENTIALITY ARE ASSERTED MUST BE SUBMITTED, BOUND SEPARATELY AND CLEARLY MARKED AS SUCH.

SPECIFIC

Please read the instructions listed below before completing this application. First determine the type of registration action, listed in BLOCK A, for which you are submitting this application. For applications submitted in connection with NEW REGISTRATION actions, Sections I, III, and IV must be completed by the applicant. For applications submitted in connection with amended registration actions, Section I, II, and IV must be completed by the applicant.

BLOCK A - Check the appropriate action for which you are submitting this form.

Section I - This Section must be completed for both REGISTRATION and AMENDED REGISTRATION actions.

1. **Company/Product Number** - Insert your company number, if one has been assigned. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If application is for an amendment, insert the registration number of the product.
2. **Date** - Fill in the appropriate date.
3. **Product Manager** - If known, fill in the name and number of the Product Manager.
4. **Proposed Classification** - Specify the proposed classification for this product.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters.

An applicant NOT residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.

6. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.

AMENDMENT INFORMATION

Section II - This Section must be completed for all applications submitted in connection with AMENDED REGISTRATION:

1. **Subject of Amendment** - Check the appropriate block, and provide a brief explanation of the purpose(s) for the amendment, such as: "the addition, deletion, or change of active ingredient"; "to change inert ingredient"; "general label revisions of precautionary statements", etc.

PACKAGING AND CONTAINER INFORMATION

Section III - This Section must be completed for all applications submitted in connection with NEW REGISTRATION.

1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Indicate the location of the statement of net contents.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Direction** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicate the method product labeling is attached to retail container.

CONTACT POINT

Section IV - This Section must be completed for all REGISTRATION and AMENDED REGISTRATION applications.

- 1-5. Self-explanatory.



U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDE PROGRAM (TS-767)
WASHINGTON, D.C. 20460

APPLICATION FOR PESTICIDE:

☐ REGISTRATION
☒ AMENDMENT

Please read instructions
on reverse before com-
pleting.

SECTION I

1. COMPANY/PRODUCT NO. 35900-3 2. DATE 10/26/83 3. PRODUCT MANAGER John H. Lee (31) 4. PROPOSED CLASSIFICATION ☒ GENERAL ☐ RESTRICTED

5. NAME AND ADDRESS OF APPLICANT (Include ZIP Code)

Ionics, Incorporated
3039 Washington Pike
P.O. Box 99
Bridgeville, PA 15017

☐ CHECK IF THIS IS A NEW ADDRESS

6. PRODUCT NAME

General Ionics Model MIVSH-8 Bacteriostatic Water Conditioner

SECTION II

1. SUBJECT OF AMENDMENT

☐ RESUBMISSION IN RESPONSE TO AGENCY LETTER DATED _____

☐ FINAL PRINTED LABEL IN RESPONSE TO AGENCY LETTER DATED _____

☒ OTHER (explain below)

Change Product Name

From: General Ionics Model MIVSH-8 Bacteriostatic
Water Conditioner

To: General Ionics Model IQ0820B Bacteriostatic
Water Conditioner

Please Find Attached Revised Labeling

SECTION III

1. WILL THIS PRODUCT BE PACKAGED IN:

CHILD-RESISTANT PACKAGING ☐ YES ☐ NOUNIT PACKAGING ☐ YES ☐ NO

If YES, unit pkg. wt. _____ No. per container _____

WATER-SOLUBLE PACKAGING ☐ YES ☐ NO

If YES, pkg. wt. _____ No. per container _____

2. TYPE OF CONTAINER

☐ METAL☐ PLASTIC☐ GLASS☐ PAPER☐ OTHER (Specify) _____

3. LOCATION OF NET CONTENTS

☐ LABEL☐ CONTAINER

4. SIZE(S) OF RETAIL CONTAINER

5. LOCATION OF LABEL DIRECTIONS

☐ ON LABEL☐ ON MATERIAL ACCOMPANYING PRODUCT

6. MANNER IN WHICH LABEL IS AFFIXED TO PRODUCT

☐ LITHOGRAPH☐ OTHER (Specify) _____☐ PAPER GLUED☐ STENCILED

SECTION IV

1. CONTACT POINT (Complete items directly below for identification of individual to be contacted, if necessary, to process this application).

NAME

Walter J. Polens, V.P., Ionics, Inc.

TITLE

Vice President

TELEPHONE NO. (Include Area Code)

(412) 343-1040

2. SIGNATURE

3. TITLE

4. TYPED NAME

Walter J. Polens

5. DATE SIGNED

10/25/83

6. DATE APPLICATION RECEIVED (Stamped)

INSTRUCTIONS

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2. Confidential Statement of Formula (EPA Form 8570-4).
3. Five copies of draft labeling.
4. Three copies of any data submitted.

Submission of Labeling - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8 1/2 x 11 inch paper or as a mock-up of the proposed label. If prepared as a mock-up it should be constructed in such a way as to facilitate storage in an 8 1/2 x 11 inch file. Mock-up labels significantly smaller than 8 1/2 x 11 inches should be mounted on 8 1/2 x 11 inch paper for submission.

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2. **Date** - Fill in the appropriate date.
3. **Product Manager** - If known, fill in the name and number of the Product Manager.
4. **Proposed Classification** - Specify the proposed classification for this product.
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6. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company trade designations.

AMENDMENT INFORMATION

Section II - This Section must be completed for all applications submitted in connection with AMENDED REGISTRATION.

1. **Subject of Amendment** - Check the appropriate block, and provide a brief explanation of the purpose(s) for the amendment, such as: "the addition, deletion, pest, or crop"; "to change inert ingredient"; "general label revisions of precautionary statements", etc.

PACKAGING AND CONTAINER INFORMATION

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6. **Manner in which label is affixed to product** - Indicate the method product labeling is attached to retail container.

CONTACT POINT

Section IV - This Section must be completed for all REGISTRATION and AMENDED REGISTRATION applications.

- 1-5. Self-explanatory.



IONICS
IONICS, INCORPORATED

P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE A. C. 412 343-1040 TWX 5106973299

October 25, 1983

Mr. John H. Lee, Product Manager (31)
U.S. Environmental Protection Agency
Disinfectants Branch, Registration Division (TS-767C)
401 M Street S.W.
Washington, D.C. 20460

Subject: General Ionics Model MIVSH-8 Bacteriostatic Water Conditioner
EPA Registration No. 35900-3

Dear Mr. Lee:

Please find enclosed our completed EPA Form 8570-1, Application For Pesticide-Amendment for minor changes made in the subject labeling. Also enclosed is the following:

- (5) Labels which will be affixed to the mineral tank (WQA Gold Seal, EPA Registration Label And Capacity/Salt Label)
- (5) Labels which will be affixed to the outside of the shipping carton
- (5) Homeowner's Manual which will be inside shipping carton
- (5) Installation Instruction booklet which will be inside shipping carton
- (5) Questions & Answers brochure which will be inside shipping carton
- (5) Color brochure for sales personnel

We trust this application for changes in labeling is complete and in proper order.
We look forward to hearing from you in this regard.

Mr. John H. Lee, Product Manager (31)

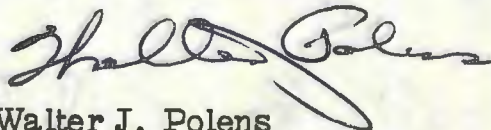
October 25, 1983

U.S. Environmental Protection Agency

Page 2

Very truly yours,

IONICS, INCORPORATED
Bridgeville Plant



Walter J. Polens
Vice President

Enclosures
WJP/mlc

cc: Mr. J.D. Collins, Ionics, Inc.

5323

revised 7/13/83

Record Number 106734

Reference Number 11

Input Date _____

CODING FORM FOR APPLICATIONS FOR REGISTRATION/AMENDMENTS

File Symbol/Reg.No. 35900-3 PM 31 [8] Action Code 300

[10] Descriptor (Amend/Resubmissions only) _____

[05] Intrastate Call-in ☐ (Y) Yes ☒ (N) No [15] Child-resistant Packaging ☐ (C) Certification ☐ (S) Service Person

[20] Registration Type: ☐ (1) Conditional ☒ (2) Unconditional ☐ (R) Non-residential Use Only ☒ (N) Not Applicable

[25] Proposed Classification: [30] Final Classification:

☐ (R) Restricted ☐ (R) Restricted ☒ (N) Not Classified
☐ (G) General ☐ (G) General

[35] Date on Application: 09/20/83 [04] EPA Received Date: 09/22/83 [40] Date Received by PM: 09/22/83
MO DAY YR MO DAY YR MO DAY YR

[80] Method of Support:

[85] Certification Statement:

☐ (1) Cite-All ☒ (4) Not Applicable ☐ (1) Yes ☒ (3) Not Applicable
☐ (2) Alternate ☐ (5) Not Submitted ☐ (2) Not Submitted
☐ (3) Combined ☐ (6) Owner Submission

Reviews Requested: ☐ (7) Total Submission

RD
PM
PL
CH
EF

DATE SENT	DUE DATE	DATE RETURNED

RESPONSE CODE	RESPONSE DATE
38	10-3-83

[108] Status: _____

[115] FINAL Response ACTION: Code 38

[120] Response Date 07 OCT 1983
MO DAY YR

75-DAY RESPONSE DUE DATE: ☐ (Y) Yes ☐ (N) No

07 OCT 1983

Ionics Incorporated
P.O. Box 99
Bridgeville, PA 15017

Attention: Walter J. Polens

Gentlemen:

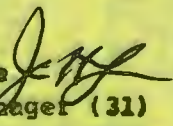
Subject: General Ionics Model MIVSH-8 Bacteriostatic
Water Conditioner
EPA Registration No. 35900-3 ✓
Hygiene Replacement Media For General Ionics
Model MIVSH-8 Bacteriostatic Water Conditioner
EPA Registration No. 35900-8
General Ionics Model MIVSH-12 Bacteriostatic
Water Conditioner
EPA Registration No. 35900-9
Your Submissions Dated September 20, 1983

Enclosed are three application forms, as requested in your letter of September 20, 1983, for use in amending the registrations of the subject products. These forms should be submitted, along with the proposed revised draft labeling, for minor changes in the product name and in the literature. It should be noted, however, that if substantive changes are made, additional forms, information and/or data may be required.

We have forwarded to you, under separate cover, a registration kit with all of the forms and information that are needed to apply for a new registration.

If we can be of any further assistance, please do not hesitate to contact us.

Sincerely yours,

John R. Lee 
Product Manager (31)
Disinfectants Branch
Registration Division (TS-767C)

Enclosures (3)

TS-767C:JLee:DCR-11902:WANG-0854C:KIM:Raven:479-2013:10/4/83

CONCURRENCES							
SYMBOL ▶							
SURNAME ▶							
DATE ▶							



IONICS
IONICS, INCORPORATED

P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE A. C. 412 343-1040 TWX 5106973299

September 20, 1983

Mr. John Lee, Manager-Product Team 31
U.S. Environmental Protection Agency
Disinfection Branch
Registration Division (TS-767C)
401 M Street S.W.
Washington, D.C. 20460

Subject: EPA Reg. No. 35900-3, MIVSH- 8 Bacteriostatic Water Conditioner
EPA Reg. No. 35900-8, HYgene Replacement Media
EPA Reg. No. 35900-9, MIVSH-12 Bacteriostatic Water Conditioner

Dear Mr. Lee:

We are anticipating some minor changes in product name and literature on the above three (3) subject registrations. Please forward to my attention the necessary forms for this procedure.

Also we would appreciate a complete set of forms required for a new product registration.

Thank you for your attention in this matter.

Very truly yours,

IONICS, INCORPORATED
Bridgeville Plant

Walter J. Polens
Walter J. Polens
Vice President

WJP/mlc

cc: Mr. J.D. Collins, Ionics, Inc.

ENFORCEMENT CASE REVIEW

TO: Director, Pesticides Enforcement Division
Office of Enforcement and General Counsel

I.D. NO.
1758-01-01
EPA REGISTRATION NO.
35900-3

PRODUCT NAME (On sample label)

General Ionics Model MIVSH-8 Bacteriostatic Water Conditioner

COMPANY NAME AND ADDRESS (On sample label) (Include ZIP code)

Ionics, Incorporated
P.O. Box 99
Bridgeville, PA 15017

REGISTRATION STATUS AT TIME OF SHIPMENT

☒ REGISTERED
☐ NOT REGISTERED

DISTRIBUTOR STATUS AT TIME OF SHIPMENT (If applicable)

BASIC PRODUCT NAME

General Ionics Model MIVSH-8
Bacteriostatic Water Conditioner

PRODUCT SUPPLEMENTALLY REGISTERED

☐ YES ☒ NO

GISTRANT NAME AND ADDRESS (Include ZIP code)

Economy Softening & Purification
606 Frisco Ave.
Metairie, LA 70005

DATE OF SUPPLEMENTAL REGISTRATION

No record as of print-out
of 04/06/83

OTHER PERTINENT REGISTRATION DATA

IS THIS A PESTICIDE? ☐ YES (If yes, list claims below) ☐ NO

PESTICIDE CLAIMS

SIGNATURE OF BRANCH CHIEF (Registration Div., Office of Pesticides Programs)

DATE

ENFORCEMENT CASE REVIEW
(Test and Label)

ID NUMBER

1738-01-01

EPA REGISTRATION NUMBER

35900-3

TYPE OF REVIEW

CHEMISTRY

EFFICACY

SAFETY

OTHER (Specify)

TEST RESULTS AND SIGNIFICANCE

LABELING REVIEW

ARE THERE ANY SIGNIFICANT LABELING DEFECTS?

☒

YES (If yes, list substantial discrepancies and significances below)

☐

NO

DATE OF ACCEPTANCE OF
APPLICABLE LABELING

3-13-78

SUBSTANTIAL DISCREPANCIES AND SIGNIFICANCES

Since there is more than one water softener registered, the claim that this product is the only one registered by EPA is false.

The claim "purifies" on the sample advertisement exceeds the level of product effectiveness indicated on accepted labeling.

Dorothy M. Portner
Microbiologist 6/30/83

16 FEB 1983

Ionics Incorporated
P.O. Box 99
Bridgeville, PA 15017

Attention: Walter J. Polens
Vice President

Subject: General Ionics Model MIVSH-12
Bacteriostatic Water Conditioner
EPA Reg. No. 35900-9
Submission dated January 31, 1983

The brochure (Questions and answers about General Ionics Bacteriostatic Water Conditioners) submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, is acceptable.

A stamped copy is enclosed for your records.

Sincerely,

John H. Lee
Product Manager 31
Disinfectants Branch
Registration Division (TS-767C)



ACCEPTED

FEB 16 1983

Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under 35100-9
EPA Reg. No.

GENERAL IONICS BACTERIOSTATIC WATER CONDITIONERS

Q. First, what is a Bacteriostatic Water Conditioner?

A. A Bacteriostatic Water Conditioner is one which not only softens municipally treated water, but also inhibits the growth of bacteria within the ion exchange softening filter medium.

Q. Is there a need to inhibit the growth of bacteria in potable (drinking) water?

A. Since potable water can, by law, contain a number of harmless bacteria indigenous to municipally treated water, the potential for a build-up or growth of these bacteria trapped within the ion exchange softening filter medium does exist.

Q. Why is there a build-up of bacteria in a water conditioning unit?

A. The low level of bacteria in the municipally treated water along with organic compounds normally present in a water supply become trapped in the filter media bed. After a period of time the filter bed contains a considerable number of bacteria and, in the presence of the organic compounds which become a source of nutrients for bacteria, the filter then becomes a breeding place for bacterial growth.

Q. What is in the Bacteriostatic Water Conditioner that inhibits the growth of bacteria within the filter medium?

A. The inhibiting agent is HYgene—an Environmental Protection Agency Registered Bacteriostatic Water Filter Medium. It is the exclusive property of Ionics, Incorporated. Technically, HYgene is a silver-impregnated granular activated carbon. A layer of HYgene is placed on top (water inlet side) of the ion exchange softening resin inside the water conditioner. The top section of the filter bed is the area where excessive bacteria growth usually takes place, especially during non-flow periods when the water is not in use, such as overnight or when the unit is unused during vacation periods. Bacterial level in ion exchange resins is a transitory phenomenon which is markedly decreased after a period of flow or a regeneration cycle.

Q. What is the expected life of the HYgene Bacteriostatic Water Filter medium contained in the General Ionics Water Conditioner Unit?

A. The HYgene medium requires replacement according to the Model as follows:

- Model MIVSH-8 - The medium ~~must~~ ^{should} be replaced after 75,000 gallons of municipally treated water have passed through the unit, or for an average family of four, the approximate life is one year.
- Model MIVSH-12 — The medium ~~must~~ ^{should} be replaced after 150,000 gallons of municipally treated water have passed through the unit, or for an average family of four, the approximate life is two years.

Q. Are there any Environmental Protection Agency restrictions that I should know?

A. There are no restrictions or precautions for your concern. The EPA has, however, registered the General Ionics Bacteriostatic Water Conditioners for use on treated municipally supplied tap water, which precludes its use on well water.

**QUESTIONS
&
ANSWERS
ABOUT**



**GENERAL IONICS
BACTERIOSTATIC
WATER
CONDITIONERS**



IONICS

IONICS, INCORPORATED

P.O. BOX 99 • BRIDGEVILLE, PA. 15017

**INTERNATIONAL WATER CONSULTANTS AND
EQUIPMENT MANUFACTURERS • MEMBER WATER
QUALITY ASSOCIATION**

ENFORCEMENT CASE REVIEW	
TO: Director, Pesticides Enforcement Division Office of Enforcement and General Counsel	
I.D. NO. 106709	
EPA REGISTRATION NO. 35900-3	
PRODUCT NAME (On sample label) IONICRON MODEL PAC-3 BACTERIOSTATIC WATER CONDITIONER	
COMPANY NAME AND ADDRESS (On sample label) (Include ZIP code) Ionicron, Inc. Dallas, Texas	REGISTRATION STATUS AT TIME OF RENEWAL Collection <input checked="" type="checkbox"/> REGISTERED <input type="checkbox"/> NOT REGISTERED
DISTRIBUTOR STATUS AT TIME OF SHIPMENT (If applicable)	
BASIC PRODUCT NAME GENERAL IONICS MODEL MIVSH-8 BACTERIOSTATIC WATER CONDITIONER	PRODUCT SUPPLEMENTALLY REGISTERED * <input type="checkbox"/> YES <input type="checkbox"/> NO
REGISTRANT NAME AND ADDRESS (Include ZIP code) Ionics, Incorporated P.O. Box 99 Bridgeville, PA 15017	DATE OF SUPPLEMENTAL REGISTRATION
OTHER PERTINENT REGISTRATION DATA *A company number has not been assigned to Ionicron, Inc., Dallas, TX. They are not supplementally registered under EPA Reg. No. 35900-3. Company number 42610 is assigned to Ionicron Corporation, 307 Droste, St. Charles, MO 63301. They are supplementally registered for IONICRON MODEL PAC-3 BACTERIOSTATIC WATER CONDITIONER under EPA Reg. No. 35900-3-42610 dated 12-7-78.	
IS THIS A PESTICIDE? <input checked="" type="checkbox"/> YES (If yes, list claims below) <input type="checkbox"/> NO	
PESTICIDE CLAIMS	
SIGNATURE OF BRANCH CHIEF (Registration Div., Office of Pesticides Programs) Edward L. Bunch Enforcement Coordinator - Registration	DATE 10/24/80

ENFORCEMENT CASE REVIEW
(Test and Label)

ID NUMBER

106709

EPA REGISTRATION NUMBER

35900-3

TYPE OF REVIEW

☒ CHEMISTRY ☒ EFFICACY ☒ SAFETY ☐ OTHER (Specify)

TEST RESULTS AND SIGNIFICANCE

no report of chemical analysis. Documentary samples

LABELING REVIEW

ARE THERE ANY SIGNIFICANT LABELING DEFECTS?

☒ YES (If yes, list substantial discrepancies and significances below)

☐ NO

DATE OF ACCEPTANCE OF APPLICABLE LABELING

3/12/78

SUBSTANTIAL DISCREPANCIES AND SIGNIFICANCES

Exhibit B - page 10. The EPA registration number 3-42-610 is incorrect and should be EPA Reg No 3900-3.

Exhibit E - The EPA Reg No 410.35-900-3-42610 is incorrect and should be EPA Reg No 410.35900-3-42610.

Statements such as "only available on the Environmental Protection Agency's registered" and "EPA registered" are true statements and are correct as far as they go. The accepted label and manual are attached for your information.

11/24/80

SUBMISSION REVIEW RECORD				1. REGISTRATION NUMBER				CYCLE	2. DATE RECEIVED		
				359000 -				303	MO	DAY	YR
3. 3CID PUBLICATION NECESSARY <input type="checkbox"/> YES <input type="checkbox"/> NO				4. PETITION NO.				5. RECEIVED PM TEAM MO DAY YR 8 16 78			
6. METHOD OF SUPPORT <input type="checkbox"/> 2A <input type="checkbox"/> 2B <input type="checkbox"/> 2C				7. PRODUCT MANAGER Banks				NO. 31	8. PROJECTED RETURN MO DAY YR		
9. DATE PULLED		10. DATE PUBLISHED		11. ACTION TYPE Resub				CODE 51	12. OUTGOING DATE MO DAY YR 10 10 78		
REV SEQ.	REVIEW TYPE CODE	REVIEW TYPE	REVIEWER CODE (Initials)	SIGNATURE OF REVIEWER		COM- MENT CODE	DATE REVIEW COMPLETED MO DAY YR				
	A	REVIEWABILITY TEAM									
	B	PRODUCT MANAGER TEAM EFFICACY REVIEW									
	C	PRODUCT MANAGER TEAM HUMAN SAFETY REVIEW									
	D	PRODUCT MANAGER TEAM ENVIRONMENTAL SAFETY REVIEW									
	E	PRODUCT MANAGER TEAM RESUBMISSION REVIEW	PGD	R. Douglas			09	18	78		
	F	PRODUCT MANAGER									
	G	INTERAGENCY REFERRAL									
	H	COST-BENEFIT REVIEW									
	I	PUBLIC COMMENTS REVIEW									
	J	EEE BRANCH INSECTICIDE EFFICACY									
	K	EEE BRANCH HERBICIDE EFFICACY									
	L	EEE BRANCH FUNGICIDE EFFICACY									
	M	EEE BRANCH RODENTICIDE EFFICACY									
	N	EEE BRANCH DISINFECTANT EFFICACY									
	O	CHEMISTRY BRANCH RESIDUE CHEMISTRY									
	P	EEE BRANCH ENVIRON- MENTAL CHEMISTRY									
	Q	TOXICOLOGY BRANCH HUMAN SAFETY									
	R	EEE BRANCH ENVIRON- MENTAL SAFETY									
	S										
	T										
PRODUCT MANAGER SIGNATURE				TYPE OF RESPONSE				CODE			

IONICS, INC.
Attn: Walter Polens
P.O. Box 99
Bridgeville, PA 15017

1 OCT 1978

Gentlemen:

Subject : GENERAL IONICS MODEL MIVSH-8 BACTERIOSTATIC
WATER CONDITIONER
EPA Reg. No. 35900-3
Letter of August 15, 1978

This is in reply to your letter of August 15, 1978 requesting that we affix ten "confidential" marked stickers to the test protocols and test results submitted by Ionics, Inc. for the subject product. These stickers are not satisfactory for the purpose stated and they are therefore being returned to you.

We wish to inform you that it is the responsibility of the applicant to stamp confidential and separate any information which he so considers of a confidential nature prior to sending it to this Agency. However, if you wish, we suggest that you arrange an appointment with us for the purpose of bringing your "confidential" stamper in to stamp that information submitted in support of this product's registration which you consider of a confidential nature.

For your information, we direct your attention to the enclosed FIFDA, as Amended, Sections 3(c)1(D) and 3(C)2, p. 6 regarding test data submitted in support of registration and also Section 10(b) p.14, in regard to the type of information which may be protected from disclosure by Section 10.

You may arrange an appointment for a meeting for the purpose mentioned above by contacting Mr. James H. Banks on (202) 426-2636, at your convenience.

Sincerely,

John H. Lee *JHL*
~~Product Manager~~ 31
Disinfectants Branch
Registration Division, TS-767

Enclosures (11) 10 stickers
FIFDA, AS Amended)



IONICS
IONICS, INCORPORATED

P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE A. C. 412 343-1040 TWX 5106973299

August 15, 1978

U.S. Environmental Protection Agency
Registration Division (WH-567)
Room 343
401 M Street S.W.
Washington, DC 20460

Attention: E. F. Brown
Chief, Disinfectants Branch

Subject: General Ionics Model MIVSH-8 Bacteriostatic
Water Conditioner
File Symbol 35900-G
Registration No. 35900-3

Gentlemen:

Enclosed are ten (10) stickers marked confidential.
We request that these be affixed to our test protocols and
test results on our General Ionics Model MIVSH-8 Bacterio-
static Water Conditioner, EPA Registration No. 35900-3.

It is my understanding that this will make this whole
file company confidential and cannot be shown to anyone
without the consent of Ionics, Incorporated. Your cooperation
above is very much appreciated.

Very truly yours,

IONICS, INCORPORATED
Bridgeville Plant

Walter J. Polens
Vice President

WJP/no

Enclosure

02970

84-843

CODING FORM FOR APPLICATIONS FOR REGISTRATION/AMENDMENTS

File Symbol/Reg.No. 35900-3 PM 31 [8] Action Code 300

[10] Descriptor (Amend/Resubmissions only) phone call

[05] Intrastate Call-in ☐ (Y) Yes ☐ (N) No
 [15] Child-resistant Packaging ☐ (C) Certification ☐ (S) Service Person

[20] Registration Type:
☐ (1) Conditional ☐ (2) Unconditional
☐ (R) Non-residential Use Only
☒ (N) Not-Applicable

[25] Proposed Classification: [30] Final Classification:
☐ (R) Restricted ☐ (R) Restricted
☐ (G) General ☐ (G) General ☐ (N) Not Classified

[35] Date on Application: 01/24/83 [04] EPA Received Date: 01/24/83 [40] Date Received by PM: 01/24/83
 MO DAY YR MO DAY YR MO DAY YR

[80] Method of Support: ☐ (1) Cite-All ☐ (2) Alternate ☐ (3) Combined
☐ (4) Not Applicable ☐ (5) Not Submitted
 [85] Certification Statement: ☐ (1) Yes ☐ (2) Not Submitted ☐ (3) Not Applicable

Reviews Requested:

RD
PM
PL
CH
EF

DATE SENT	DUE DATE	DATE RETURNED	RESPONSE CODE	RESPONSE DATE

[108] Status: _____

[115] FINAL Response Code 38

[120] Response Date 01/28/83
 MO DAY YR

75-DAY RESPONSE DUE DATE: ☐ (Y) Yes ☐ (N) No

Innison, Inc.
Washington Pike and Route 30
Bridgeville, PA 15017

28 JAN 1983

Attention: Mr. Walter J. Polan

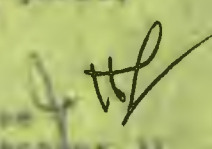
Subject: General Ionics Model MIVS-1
Bacteriostatic Water Conditioner
EPA Reg. No. 35600-3

This is a follow-up of our telephone conversation
(January 24, 1983) regarding the need to modify the
mandatory language that appears in the home owner's
manual for subject product.

As agreed, you will revise the statement, "The
Hygiene media must be replaced after 75,000 gallons of
municipally treated water have passed through the unit"
to read the same as or similar to the following: "We
recommend or it is recommended that the media should
be replaced xxxx."

We thank you for your cooperation in this matter and
are looking forward to receiving the revised labeling in
the near future.

Sincerely yours,

John W. Lee 
Product Manager II
Disinfectant Branch
Registration Division (75-7670)

SUBMISSION REVIEW RECORD			1. REGISTRATION NUMBER				CYCLE	2. DATE RECEIVED		
3. 3CID PUBLICATION NECESSARY			4. PETITION NO.				5. RECEIVED PM TEAM			
6. METHOD OF SUPPORT			7. PRODUCT MANAGER				NO.	8. PROJECTED RETURN		
9. DATE PULLED			10. DATE PUBLISHED				11. ACTION TYPE			
12. OUTGOING DATE			13. DATE REVIEW COMPLETED				14. PRODUCT MANAGER SIGNATURE			
<input type="checkbox"/> YES <input type="checkbox"/> NO							MO DAY YR			
<input type="checkbox"/> 2A <input checked="" type="checkbox"/> 2B <input type="checkbox"/> 2C			Banks				33	MO DAY YR		
12-9-76			Resubmission				51	MAR 13 1978		
REV. SEQ.	REVIEW TYPE CODE	REVIEW TYPE	REVIEWER CODE (Initials)	SIGNATURE OF REVIEWER			COM-MENT CODE	DATE REVIEW COMPLETED		
A		REVIEWABILITY TEAM								
B		PRODUCT MANAGER TEAM EFFICACY REVIEW								
C		PRODUCT MANAGER TEAM HUMAN SAFETY REVIEW								
D		PRODUCT MANAGER TEAM ENVIRONMENTAL SAFETY REVIEW								
E		PRODUCT MANAGER TEAM RESUBMISSION REVIEW		R.G.D. R. Douglas				NA 030778		
F		PRODUCT MANAGER								
G		INTERAGENCY REFERRAL								
H		COST-BENEFIT REVIEW								
I		PUBLIC COMMENTS REVIEW								
J		EEE BRANCH INSECTICIDE EFFICACY								
K		EEE BRANCH HERBICIDE EFFICACY								
L		EEE BRANCH FUNGICIDE EFFICACY								
M		EEE BRANCH RODENTICIDE EFFICACY								
N		EEE BRANCH DISINFECTANT EFFICACY								
O		CHEMISTRY BRANCH RESIDUE CHEMISTRY								
P		EEE BRANCH ENVIRONMENTAL CHEMISTRY								
Q		TOXICOLOGY BRANCH HUMAN SAFETY								
R		EEE BRANCH ENVIRONMENTAL SAFETY								
S										
T										
PRODUCT MANAGER SIGNATURE				TYPE OF RESPONSE				CODE		
James H. Banks				Registration Notice				11		

U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDES PROGRAMS
REGISTRATION DIVISION (WH-567)
WASHINGTON, D.C. 20460

EPA REGISTRATION NO.

5

DATE OF ISSUANCE

TERM OF ISSUANCE

NOTICE OF PESTICIDE: ☒ REGISTRATION
☐ REREGISTRATION

(Under the Federal Insecticide, Fungicide,
and Rodenticide Act, as amended)

NAME OF PESTICIDE PRODUCT

NAME AND ADDRESS OF REGISTRANT (Include ZIP code)

MAR 13 1978

NOTE: Changes in labeling formula differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above U.S. EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby Registered/Reregistered under the Federal Insecticide, Fungicide, and Rodenticide Act.

A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.

Registration is in no way to be construed as an indorsement or approval of this product by this Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

☐ ATTACHMENT IS APPLICABLE

SIGNATURE OF APPROVING OFFICIAL

DATE

**GENERAL-IONICS®
MODEL MIVSH-8
BACTERIOSTATIC WATER CONDITIONER
WITH HYGENE®**

Inhibits the growth of bacteria within the ion exchange softener
filter medium for municipally treated water.

CAUTION: KEEP OUT OF REACH OF CHILDREN

EPA Reg. No. 35900-3 EPA Est. No. 35900 PA 01

Storage of HYgene® Material: Store in closed container which excludes moisture
and chemical fumes.

Active Ingredient: Silver as metallic 0.07%

Inert Ingredients: Cation Exchange Resin 80.00%

Gravel 13.33%

Activated Carbon 6.60%

Total Inert Ingredients 99.93%

Directions For Use: See Homeowner's Manual

Disposal Of Spent Media: Remove HYgene® media from top of filter bed and place
in suitable container for disposing with trash.

Net Contents: One (1) Bacteriostatic Water Conditioner with HYgene®

Another fine product by the manufacturers of General Ionics Water Conditioning Equipment



IONICS
IONICS, INCORPORATED

Routes 519 & 50 Bridgeville, Penna. 15017

ACCEPTED

MAR 13 1978

UNDER THE FEDERAL INSECTICIDE
FUNGICIDE AND RODENTICIDE ACT
FOR ECONOMIC POISON REGISTE-
RED UNDER NO. 35900-3

**GENERAL IONICS®
MODEL MIVSH-8
BACTERIOSTATIC WATER CONDITIONER
WITH HYGENE®**

Inhibits the growth of bacteria within the ion exchange softener
filter medium for municipally treated water.

CAUTION: KEEP OUT OF REACH OF CHILDREN

EPA Reg. No. 35900-3 EPA Est. No. 35900 PA 01

Storage of HYGENE® Material: Store in closed container which encloses moisture
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Active Ingredient: Silver as metallic 0.07%

Inert Ingredients: Cation Exchange Resin 80.00%

Gravel 13.33%

Activated Carbon 6.60%

Total Inert Ingredients 99.99%

Directions For Use: See Homeowner's Manual

Disposal Of Spent Media: Remove HYGENE® media from top of filter bed and place
in suitable container for disposing with trash.

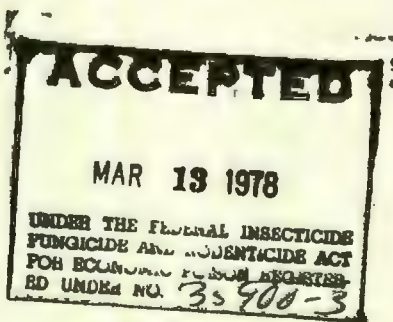
Net Contents: One (1) Bacteriostatic Water Conditioner with HYGENE®

Another fine product by the manufacturers of General Ionics Water Conditioning Equipment



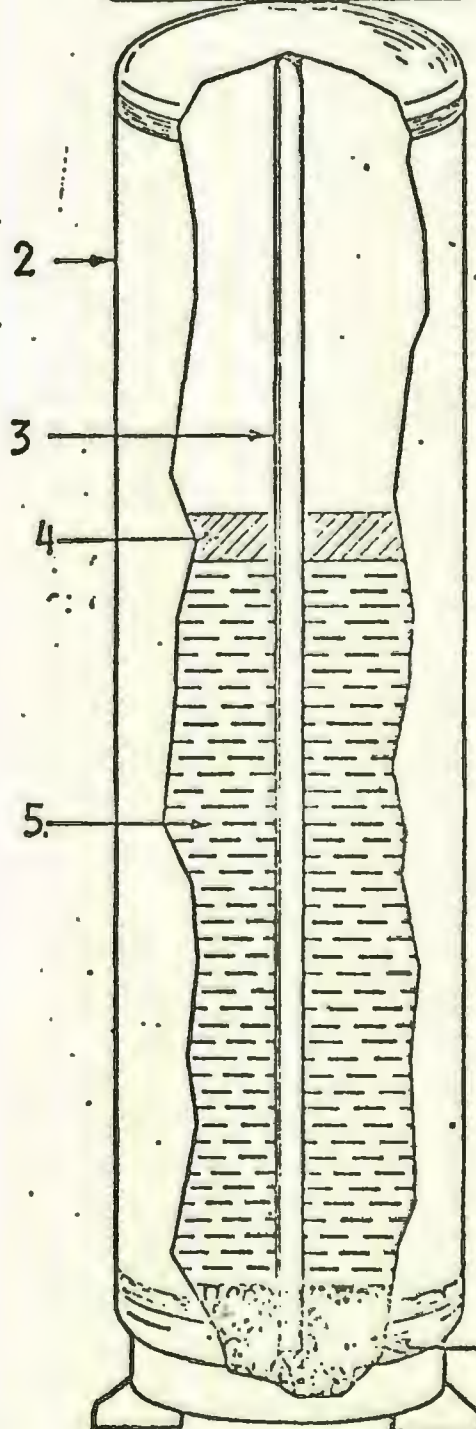
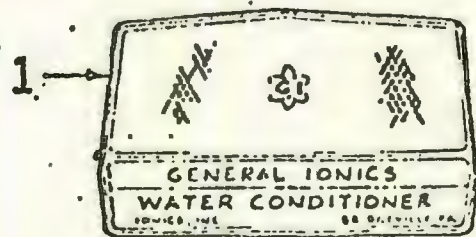
IONICS
IONICS, INCORPORATED

Routes 519 & 50 Bridgeville, Penna. 15017

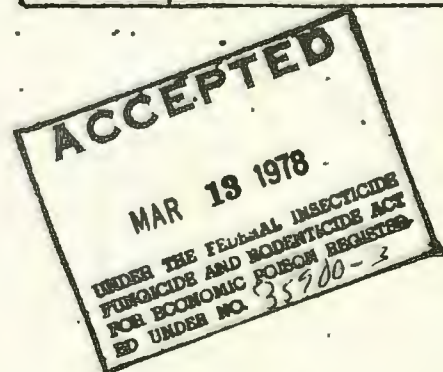


HOMEOWNER'S MANUAL
FOR
GENERAL IONICS MODEL MIVSH-8
BACTERIOSTATIC WATER CONDITIONER

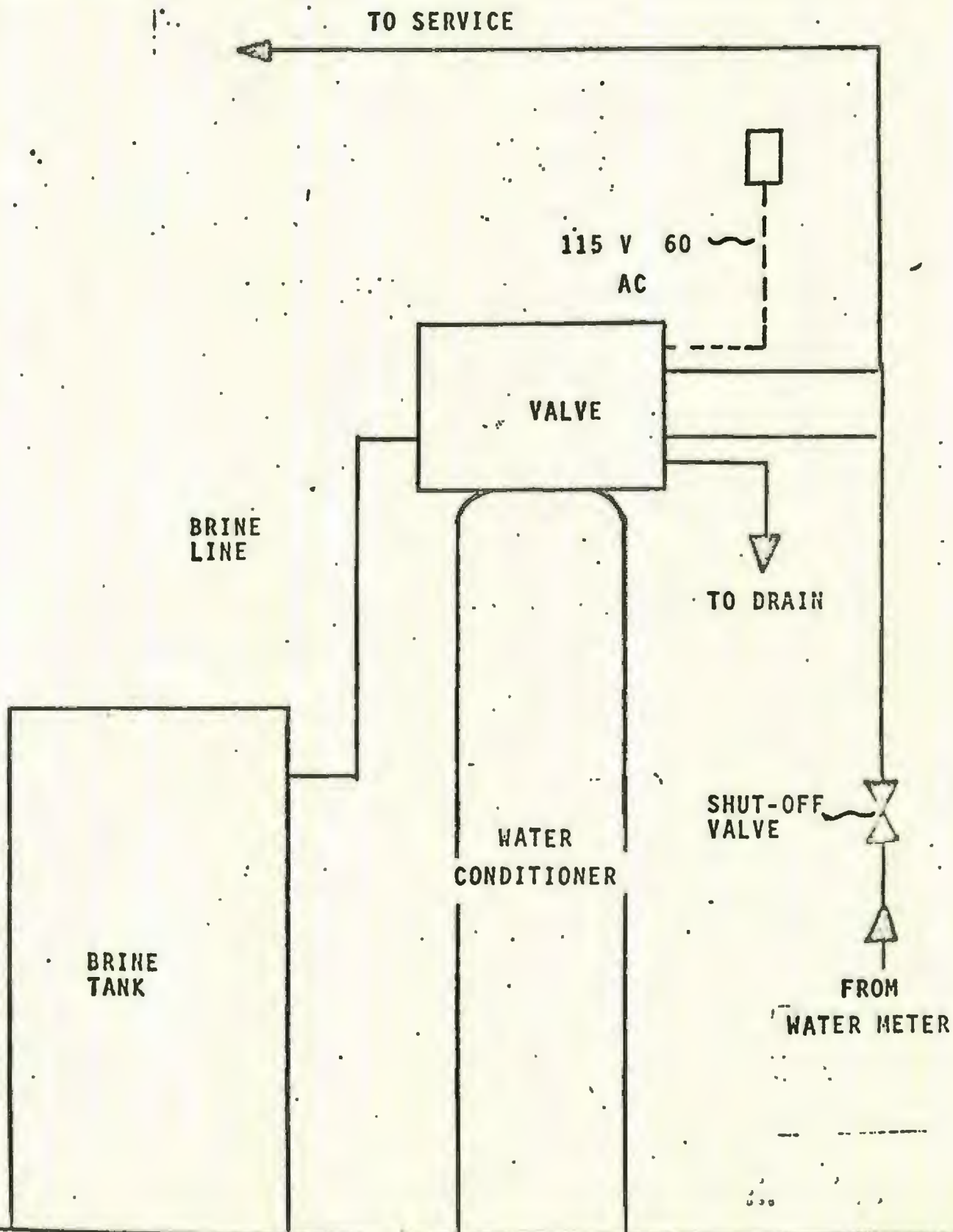
GENERAL IONICS MODEL MIVSH-8
BACTERIOSTATIC WATER CONDITIONER



Model MIVSH	
Item	Description
1	Control Valve
2	Stainless Steel Tank
3	Distributor Tube
4	HYgene Bacteriostatic Filter Media
5	Ion Exchange Softening Resin
6	Gravel



TYPICAL INSTALLATION FOR GENERAL IONICS MODEL MIVSH-8 BACTERIOSTATIC
WATER CONDITIONER



QUESTIONS AND ANSWERS CONCERNING THE MODEL MIVSH-8 BACTERIOSTATIC WATER CONDITIONER

Q. What is a Bacteriostatic Water Conditioner?

A. A Bacteriostatic Water Conditioner is one which in addition to softening municipally treated water, also inhibits the growth of bacteria within the ion exchange softening filter medium.

Q. Is there a need to inhibit the growth of bacteria in already "potable" water?

A. Since "potable" water can, by law, contain a number of harmless bacteria indigenous to municipally treated water, the potential for a buildup or growth of these bacteria trapped within the ion exchange softening filter medium does exist.

Q. Why is there a buildup of bacteria in a water conditioning unit?

The low level of bacteria in the municipally treated water along with organic compounds normally present in a water supply become trapped in the filter medium bed. After a period of time, the filter bed will contain considerable number of bacteria and in the presence of the organic compounds, which become a source of nutrients for bacteria, this filter becomes a breeding place for bacterial growth.

Q. What is in the Bacteriostatic Water Conditioner that inhibits the growth of bacteria within the filter medium?

A. The inhibiting agent is HYgene (EPA Registered Bacteriostatic Water Filter Media). HYgene is a silver impregnated granular activated carbon. A layer of HYgene is placed on top (water inlet side) of the ion exchange softening resin inside the water conditioning unit. The top section of the filter bed is the area where excessive bacteria growth usually takes place, especially during non-flow periods when the water is not in use, such as overnight. Bacterial level in ion exchange resins is a transitory phenomenon which is markedly decreased after a period of flow or a regeneration cycle.

Q. What is the expected life of the HYgene Bacteriostatic Water Filter media contained in the Model MIVSH-8 Water Conditioner Unit?

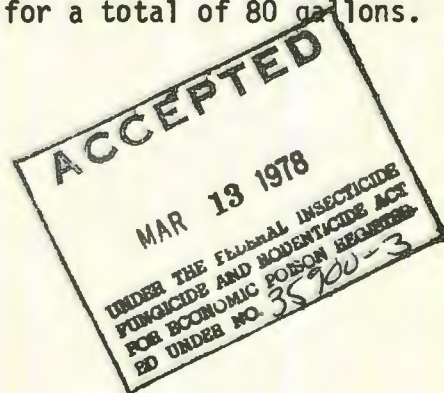
The HYgene media must be replaced after 75,000 gallons of municipally treated water have passed through the unit. Or for an average family of four (4), the approximate life is one year.

INSTALLATION INSTRUCTIONS

GENERAL CLASSIFICATION: It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

1. Select Location - The location selected must be convenient for drain facilities, electrical outlet and convenient for servicing and adding salt.
2. Unpacking - The Model MIVSH-8 Bacteriostatic Water Conditioner has been shipped complete in two cartons.
One carton contains the mineral tank which is preloaded with gravel bed, high capacity ion exchange resin and HYgene Bacteriostatic Water Filter Media. The control valve is mounted on top of this tank.
The second carton contains the salt storage tank and its components.
3. Turn main water supply off and drain system.
4. Cut the main supply line and remove approximately 6 inches of existing plumbing.
5. Remove control face plate and shroud. Place the mineral tank on the three plastic leveling legs and level.
6. Move bypass lever so indicator points to bypass position. Connect the main inlet line to the opening in the valve marked "In". Connect the house service line to the opening marked "Outlet". Connect drain line.

7. Turn main supply on. Customer will have tap water while installation is being completed.
8. Install salt storage tank. Assemble brine valve - connect brine line to control valve - add water to the salt storage tank. Add salt.
9. Pull bypass lever forward until indicator points to service position and then open a cold water faucet in kitchen sink or stationary tub to expel air. When there is a steady flow of water at the faucet, continue running at 3 GPM for 5 minutes. Then press and hold the red button on the timer. This disengages the drive gear. Turn the black knob on the large cycle dial to backwash position to expel air compressed in the unit. When there is a steady flow of water at the drain, continue running at 1.5 GPM for 10 minutes. Then again disengage the red button. Turn black knob and cycle valve to service position. Again open cold water tap at the kitchen sink or stationary tub. Continue running at a rate of 8.0 GPM for 10 minutes. If 8.0 GPM can not be achieved due to low line pressure, run water at maximum flow for a total of 80 gallons. Unit is now in service for use.





IONICS
IONICS, INCORPORATED

P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE A. C. 412 343-1040 TWX 5106973299

March 6, 1978

Mr. James H. Banks, Product Manager 33
Disinfectants Branch
Registration Division (WH-567)
U. S. Environmental Protection Agency
401 M Street S. W.
Washington, D. C. 20460

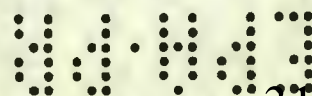
Subject: General Ionics Model MIVSH-8
Bacteriostatic Water Conditioner
File Symbol 35900-G

Dear Mr. Banks:

In accordance with my telephone conversation of March 6, 1978 with your Miss Douglas, please find enclosed two complete copies of our General Ionics Model MIVSH-8 Bacteriostatic Water Conditioner Homeowner's manual. Corrections have been made as instructed as follows:

1. Page 4 - Last answer on the page - first line, changed the words "raw water" to "municipally treated water".
2. Page 5 - Answer to first question on page - line three, changed "(raw water inlet side)" to "(water inlet side)".
3. Page 5 - Last answer - first line, changed "gallon" to "gallons".
4. Page 7 - Under Step No. 8, first line - Corrected spelling of word "assemble".

I asked Miss Douglas if there would be any changes in the label so that we might advise our printer to begin making the labels since there is a four week delivery time on this. Miss Douglas said the label is okay as we submitted it in our letter of February 27, 1978. Therefore, we have advised our printer to begin making the labels for us.



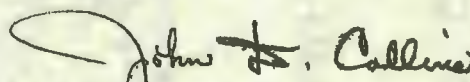
Mr. James H. Banks, Product Manager 33
Disinfectants Branch
Registration Division

March 6, 1978
Page 2

We would appreciate your early review of the changes in the Homeowner's Manual and if possible, a phone call to our Mr. Polens (412) 343-1040 with your comments.

Very truly yours,

IONICS, INCORPORATED
Bridgeville Plant



John D. Collins
Manager, Laboratory

JDC:mle

Enclosures

cc: W. J. Polens

021 2

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IONICS
IONICS, INCORPORATED

PARAPAR

P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE A. C. 412 343-1040 TWX 5106973299

PARAPAR

U. S. Environmental Protection Agency
Registration Division (WH-567)
Room 343
401 M Street S. W.
Washington, D. C. 20460

Attention: E. F. Brown
Chief, Disinfectants Branch

Subject: General Ionics Model MIVSH-8 Bacteriostatic
Water Conditioner
File Symbol 35900-G
Your Letter of February 9, 1978

Gentlemen:

In your letter of February 9, 1978 you stated in paragraph 3 on Page 1, "The product referred to above will be acceptable for registration under the Federal Insecticide, Fungicide, and Rodenticide Act; provided, finished labeling is submitted incorporating the following revisions."

- (1) The total percentage of inert ingredients must be declared on the label. Refer to Item 1 of the A-3 RET CHEMISTRY CHECKLIST enclosure.

Please see the five finished labels attached. The total percentage of inert ingredients has been listed.

- (2) Add an appropriate Net Contents statement to the label.

See enclosed labels. Net Contents statement reads as follows:

"Net Contents: One bacteriostatic water conditioner with HYgene".

- (3) Delete the use classification statement, "GENERAL CLASSIFICATION xxx with its labeling" from the label. This statement must appear in the manual where the use directions appear. Therefore, this statement should be placed immediately below the heading "INSTALLATION INSTRUCTIONS" in the Homeowner's Manual.

See enclosed labels to see that this has been removed from the previously submitted artwork for proposed label. The statement now appears in the attached Homeowner's Manual on Page 6. It is the first paragraph on Page 6, directly under Installation Instructions. "GENERAL CLASSIFICATION: It is a violation of Federal law to use this product in a manner inconsistent with its labeling."

U. S. Environmental Protection Agency
Registration Division (WH-567)

Page 2

Attention: E. F. Brown
Chief, Disinfectants Branch

- (4) The use area, "for municipally treated water," and the pest site, "within the ion exchange softening filter medium," must be included with the claim "Inhibits the growth of bacteria."

To make sure that we comply completely with your request, this has been done. See the enclosed five labels. The label reads, "Inhibits the growth of bacteria within the ion exchange softener filter medium for municipally treated water." It has also been included in the Questions and Answers that will be shipped with the water conditioner on Page 4 - Q. What is a Bacteriostatic Water Conditioner?

- (5) The claim for a "build-up of bacteria within the ion exchange softening filter medium during non-flow periods" must be qualified with a statement to indicate that the elevated bacterial level is a transitory phenomenon which is markedly decreased after a period of flow or a regeneration cycle.

On Page 5 of Questions and Answers the last sentence of the answer is as follows, "Bacterial level in ion exchange resins is a transitory phenomenon which is markedly decreased after a period of flow or a regeneration cycle."

- (6) The directions for use must indicate that the silver-impregnated activated carbon filter must be replaced in the water conditioner after 75,000 gallons of municipally treated water have been processed through the unit.

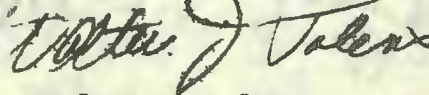
Please see Page 5 of the enclosed Questions and Answers concerning Model MIVSH-8 Bacteriostatic Water Conditioner. The second question "What is the expected life of the HYgene Bacteriostatic Water Filter media contained in the Model MIVSH-8 Water Conditioner Unit?"

Attention: E. F. Brown
Chief, Disinfectants Branch

We feel that we have complied with all of your requests and we respectfully request your prompt attention.

Very truly yours,

IONICS, INCORPORATED
Bridgeville Plant



Walter J. Polens
Vice President

WJP:mle

Enclosures



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

20878

FEB 09 1978



IONICS, INCORPORATED
Attn: Walter Polens
P.O. BOX 99
Bridgeville, PA 15017

Gentlemen:

Subject : GENERAL IONICS MODEL MIVSH-8 BACTERIOSTATIC
WATER CONDITIONER
File Symbol 35900-G
Resubmission of October 5, 1977

The data show that the innocuous bacteria in the effluent water from the "Ionics Standard MIVSH-8 Water Conditioner" control unit increased during non-flow periods. However, this elevated bacterial level was transitory since a marked decrease in the bacterial level was noted after a flow period or a regeneration cycle. The data also show that the observed bacterial proliferation during non-flow periods was controlled by the silver-impregnated activated carbon filter media incorporated into the water conditioner unit. These data, therefore, provide presumptive evidence of intrinsic value for bacteriostatic activity of the product unit during non-flow periods. At this time, no determination will be made relative to efficacy of this product unit, in use, when recommended for processing municipally treated water.

The silver concentration in the water sampled from a specially designed outlet did not exceed 50 ppb. In use, the effluent water will not be expected to contain silver because the cation exchange resin should exchange out the silver cation. Presumably, the use of this product unit would not constitute a hazard.

The product referred to above will be acceptable for registration under the Federal Insecticide, Fungicide, and Rodenticide Act; provided, finished labeling is submitted incorporating the following revisions.

(1) The total percentage of inert ingredients must be declared on the label. Refer to item 1 of the A-3 RET CHEMISTRY CHECKLIST enclosure.

EPA PR

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(2) Add an appropriate Net Contents statement to the label.

(3) Delete the use classification statement, "GENERAL CLASSIFICATION xxx with its labeling" from the label. This statement must appear in the manual where the use directions appear. Therefore, this statement should be placed immediately below the heading "INSTALLATION INSTRUCTIONS in the Homeowner's Manual.

(4) The use area, "for municipally treated water," and the pest site, "within the ion exchange softening filter medium," must be included with the claim "Inhibits the growth of bacteria."

(5) The claim for a "build-up of bacteria within the ion exchange softening filter medium during non-flow periods" must be qualified with a statement to indicate that the elevated bacterial level is a transitory phenomenon which is markedly decreased after a period of flow or a regeneration cycle.

(6) The directions for use must indicate that the silver-impregnated activated carbon filter media must be replaced in the water conditioner after 75,000 gallons of municipally treated water have been processed through the unit.

EPA Reg. No. 35900-3 is being reserved for this product. This must appear on the finished label. The "Notice of Registration" will be issued when five (5) copies of the acceptable finished (printed) labeling are submitted. Finished labeling is that which will be attached to or accompany the product (product label, instructions, literature, brochure, carton label, etc.) Refer to the attached A-79 Enclosure.

To expedite handling, please return the enclosed duplicate copy of this letter with your finished labeling.

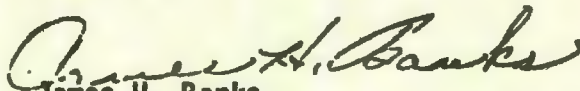
If there is any doubt as to how to make the requested corrections on the labeling, please contact us or submit revised draft labeling for our comments prior to printing the finished labeling.

EPA-PR

2-28-78

This letter does not constitute registration, and the product may not be lawfully marketed in ~~interstate~~ commerce until it is registered.

Sincerely,



James H. Banks
Product Manager 33
Disinfectants Branch
Registration Division (WH-567)

Enclosures

EPA

EPA Reg. No. _____

EPA File Symbol: 35901-GA-3 RET CHEMISTRY CHECKLIST

The following deficiencies in your application must be corrected.

- ✓ 1. An ingredient statement must declare the name and percentage of each active ingredient and the total percentage of all inert ingredients. The following form of ingredient statement complies with the Act.

ACTIVE INGREDIENTS

Name of ingredient..... %
Name of ingredient..... %
Name of ingredient..... %

INERT INGREDIENTS..... %

Products containing arsenic in any form must also declare the percentages of total and water soluble arsenic, each calculated as elementary arsenic.

- 1A The Confidential Statement of Formula (EPA Form 8570-4), must be submitted. All questions must be answered.
2. The words, "ACTIVE INGREDIENT(S)" and "INERT INGREDIENT(S)," must be printed in type of the same size and be given equal prominence. The words "ACTIVE INGREDIENT(S)" and "INERT INGREDIENT(S)" must be aligned to the same margin.
3. The ingredient statement is normally required on the front panel.
4. The ingredient statement must be sufficiently prominent and in a type size which can easily be read by a person with normal vision (6-point or larger)
5. The ingredient statement must run parallel with other text on the panel on which it appears, and must be clearly distinguishable from and must not be placed in the body of other text.
8. The names of the inert ingredients are not required to be given in the ingredient statement. However, if they are given they must be well-known common names or correct chemical names. The following name(s) do(es) not fulfill the requirements and should either be deleted or replaced:
- _____

CPA-PR

FINISHED LABELING

Finished labeling is defined as the complete markings and text that appear on or accompany the product. Finished labeling must be legible and the graphic design must not be misleading.

Submitting Procedures.

- I. When screen printing or embossing is used to print labeling directly on the container (cans, bottles, boxes, etc.), do not submit the containers. Such labeling should be submitted after it is reproduced as follows:
 - A. Screen Printing. Request your printer to supply finished copies of the labeling on paper for convenient filing. Copies may be obtained by taping a piece of paper on the container as it goes through the printing process.
 - B. Embossing. Photo copy this labeling.
- II. When paste-on labeling is used, submit the actual labeling.
- III. When the labeling involves large containers such as cans or boxes, submit legible, photo-reduced copies indicating the fraction of the actual size. The actual cans or boxes are not acceptable and will be returned. If the photo-reducing process makes the labeling illegible, any one of the following methods for submitting finished labeling would be acceptable:
 - A. Photo-reduce the labeling to an acceptable size which would fit in a letter-size file folder.
 - B. Photo-reduce the labeling in sections, so that each sheet is approximately 8-1/2 by 11 inches, or
 - C. Photo-reduce the labeling to 8-1/2 by 11 inches, and submit the labeling text in typewritten form.
- IV. When the labeling is smaller than 40 square inches, copies should be attached to a sheet of paper (8-1/2 by 11 inches).

EEE BRANCH REVIEW

DATE: IN _____ OUT _____ IN _____ OUT _____ IN 10/5/77 OUT 12/15/77
FISH & WILDLIFE ENVIRONMENTAL CHEMISTRY EFFICACY

FILE OR REG. NO. 35900-G

PETITION OR EXP. PERMIT NO. _____

DATE DIV. RECEIVED 10-5-77

DATE OF SUBMISSION 10-5-77

DATE SUBMISSION ACCEPTED _____

TYPE PRODUCTS(S): I, (D,) H, F, N, R, S Bacteriostatic Water Softener

DATA ACCESSION NO(S). _____

PRODUCT MGR. NO. 33

PRODUCT NAME(S) General Ionics Model MIVSH-8 Bacteriostatic Water Conditioner

COMPANY NAME Ionics, Inc.

SUBMISSION PURPOSE Resubmission with Data

CHEMICAL & FORMULATION Silver as metallic...0.07%

200.0 Introduction

200.1 Use

Bacteriostatic Water Softener Unit

200.2 Background Information

This submission is in response to our letter of June 20, 1977.

201.0 Data Summary

201.1 Abstract of Test Report

Three water conditioner units (composed of four pounds of gravel, 0.65 cubic foot of cation exchange water softening resin and 0.10 cubic foot of silver-impregnated activated carbon filter media) and three control units (composed of four pounds of gravel and 0.75 cubic foot of cation exchange water softening resin) were challenged with 7500 gallons of municipally treated water, intended to be representative of ten percent of the expected life of the silver-impregnated activated carbon filter media. Testing included processing 400 gallons of water, representing a 50-minute "in use" period, followed by holding periods from 16 to 90 hours and a regeneration cycle after every 1875 gallons of water processed. Efficacy of the silver-impregnated filter media to control bacterial proliferation in the ion exchange resin was demonstrated with the innocuous bacteria in tap water, supposedly identified as Pseudomonas aerogenes. The sample assays were conducted by test procedures indicated in the "Interim Requirements for Registration of Bacteriostatic Water Treatment Units for Home Use." Following this testing, the silver-impregnated activated carbon filter media was removed from the test units and stripped of remaining silver to verify that 90 percent of the silver life remained.

201.2 Data Summaries

The data submitted are summarized in the following three tables.

I. Bacteriological Results

Schedule	Influent	Microorganisms/ml Effluent	
		Product	Control
Initial	0.28	0.14	0.14
20-hr. Hold after 400 gal.	0.28	1.1	7.6
20-hr. Hold after 800 gal.	0.54	4.9	5.0 X 10 ²
22-hr. Hold after 1200 gal.	0.36	9.8 X 10 ¹	9.4 X 10 ²
69-hr. Hold after 1600 gal.	0.56	1.2 X 10 ²	3.8 X 10 ³
25% Testing Life--No Hold	2.4	2.4 X 10 ²	5.2 X 10 ²
24-hr. Hold after 1875 gal.	2.4	5.4 X 10 ¹	3.2 X 10 ³
Immed. after Regeneration	--	3.2 X 10 ¹	6.2 X 10 ¹
16-hr. Hold after 2275 gal.	1.0	2.0 X 10 ¹	2.0 X 10 ³
20-hr. Hold after 2675 gal.	0.56	6.0 X 10 ¹	4.4 X 10 ³
20-hr. Hold after 3075 gal.	0.08	7.6 X 10 ¹	5.1 X 10 ³
68-hr. Hold after 3475 gal.	0.19	1.8 X 10 ²	2.5 X 10 ⁴
50% Testing Life--No Hold	1.6	2.3 X 10 ²	8.8 X 10 ²
27-hr. Hold after 3750 gal.	1.6	9.6 X 10 ¹	1.7 X 10 ⁴
Immed. After Regeneration	--	3.9 X 10 ¹	1.4 X 10 ²
43-hr. Hold after 4150 gal.	8.1	1.7 X 10 ²	4.4 X 10 ³
16 hr. Hold after 4550 gal.	0.70	9.9 X 10 ¹	3.8 X 10 ³
90-hr. Hold after 4950 gal.	1.0	2.1 X 10 ²	4.0 X 10 ⁴
1'-hr. Hold after 5350 gal.	3.6 X 10 ²	1.3 X 10 ²	1.6 X 10 ⁴
75% Testing Life--No Hold	3.6	2.6 X 10 ²	7.3 X 10 ²
26-hr. Hold after 5625 gal.	3.6	1.6 X 10 ²	1.8 X 10 ⁴
-- after 6025 gal.	0.08	3.6 X 10 ²	8.2 X 10 ³
67-hr. Hold after 6425 gal.	0.57	2.3 X 10 ²	8.3 X 10 ⁴
19-hr. Hold after 6825 gal.	1.2 X 10 ²	1.5 X 10 ²	5.2 X 10 ⁴
22-hr. Hold after 7225 gal.	0.70	1.8 X 10 ²	4.2 X 10 ⁴
100% Testing Life--No Hold	0.08	2.4 X 10 ²	7.4 X 10 ²
48-hr. Hold after 7500 gal.	0.08	2.4 X 10 ²	6.7 X 10 ⁵
Immed. After Regeneration	--	8.0 X 10 ¹	1.5 X 10 ²

II. Test Conditions Throughout the Testing

Effluent silver concentration from Product Unit = <10-28 ppb.
Influent-effluent flow rate = 8.0 gpm for both the control and product unit.
Influent-effluent temperature = 24-25°C.
Influent-effluent pH = 8.0-8.4.
Influent-effluent total dissolved solids = 164-277 ppm.
Influent-effluent alkalinity as CaCO_3 = 20-24 ppm.
Hardness as CaCO_3 --Influent = 99-235 ppm; Effluent = <2.0 ppm.

III. Silver Concentration of Media Tested

A. Sample No. 46 New "Hygene" Silver-Impregnated Filter Media

Sample Volume - 1005 mg.
ppm Silver Found - 9.6

$$\% \text{ Silver} = \frac{9.6}{1005} \times 100 = 0.955\%$$

B. Sample No. 47 - Collected from Unit No. 1

Sample Volume - 1009 mg.
ppm Silver Found - 8.9

$$\% \text{ Silver} = \frac{8.9}{1009} \times 100 = 0.882\%$$

C. Sample No. 48 - Collected from Unit No. 3

Sample Volume - 992 mg.
ppm Silver Found - 8.7

$$\% \text{ Silver} = \frac{8.7}{992} \times 100 = 0.877\%$$

D. Sample No. 49 - Collected from Unit No. 5

Sample Volume - 1012 mg.
ppm Silver Found - 9.0

$$\% \text{ Silver} = \frac{9.0}{1012} \times 100 = 0.889\%$$

202.0 Comments Relative to Efficacy

The data show that the innocuous bacteria in the effluent water from the "Ionics Standard MIV[®] Water Conditioner" control unit increased during non-flow periods. However, this elevated bacterial level was transitory since a marked decrease in the bacterial level was noted after a flow period or a regeneration cycle. The data also show that the observed bacterial proliferation during non-flow periods was controlled by the silver-impregnated activated carbon filter media incorporated into the water conditioner unit. These data, therefore, provide presumptive evidence of intrinsic value for bacteriostatic activity of the product unit during non-flow periods. At this time, no determination will be made relative to efficacy of this product unit, in use, when recommended for processing municipally treated water.

The silver concentration in the water sampled from a specially designed outlet did not exceed 50 ppb. In use, the effluent water will not be expected to contain silver because the cation exchange resin should exchange out the silver cation. Presumably, the use of this product unit would not constitute a hazard.

202.1 Claims the Data Will Support

Efficacy claims must reflect the data developed for this product as indicated below.

1. The use area, "for municipally treated water," and the pest site, "within the ion exchange softening filter medium," must be included with the claim "Inhibits the growth of bacteria."
2. The claim for a "build-up of bacteria within the ion exchange softening filter medium during non-flow periods" must be qualified with a statement to indicate that the elevated bacterial level is a transitory phenomenon which is markedly decreased after a period of flow or a regeneration cycle.
3. The directions for use must indicate that the silver-impregnated activated carbon filter media must be replaced in the water conditioner after 75,000 gallons of municipally treated water have been processed through the unit.

Dorothy M. Portner

Dorothy M. Portner
12-15-77

Efficacy Section
Efficacy and Ecological Effects Branch

E

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: November 15, 1977

ECT: Interim Policy for the Review of Submissions
on Bacteriostatic Water Treatment Products

FROM: Associate Director for Science
Registration Division, (WH-567)

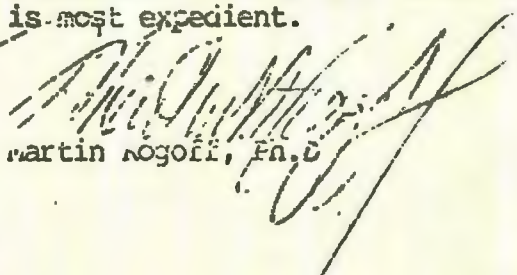
TO: Associate Director for Registration
Registration Division, (WH-567)

An issue paper which points out several deficiencies in the registration policy for bacteriostatic water treatment products has been prepared. Among the more serious problems to be dealt with is the bacteriological protocol as published in the Interim Requirements for Registration of Bacteriostatic Water Treatment Units for Home Use. This bacteriological protocol must be subjected to revision. Until that revision takes place, we should act on submissions pertaining to those products involved as follows.

1. Efficacy data developed in accordance with the bacteriological protocol mentioned above will be scanned to ascertain if there is substantive evidence which shows the product to be hazardous, and if there is evidence to indicate antibacterial activity. Products intended for use on municipally treated tap water for home use will be considered "bacteriostatic" when presumptive evidence of intrinsic value is provided by data developed in accordance with the "Interim Requirements for Registration of Bacteriostatic Water Treatment Units for Home Use." Such products will be presumed to be nonhazardous when it is shown, by the same protocol, that the silver concentration in the effluent water does not exceed 50 ppb. If the product is found to be presumptively bacteriostatic and nonhazardous, it should be registered.
2. If on the other hand, there is evidence which suggests that the products is hazardous (silver concentration in the effluent water exceeds 50 ppb), it should not be registered.
3. At this time, no determination will be made as to efficacy of proposed products or units, in-use, as claimed. When the confirmatory bacteriostatic protocol for in-use testing is developed and amended

requirements published, all bacteriostatic water treatment products must be tested by this protocol to establish confirmation of in-use efficacy. Any registered products that fail will be subjected to cancellation proceedings.

Any review of data submissions not in accord with this procedure should be resubmitted to EEE Branch, or overridden by Chief, Disinfectants Branch, with notification to EEE Branch, whichever is most expedient.


Martin Rogoff, En.C

SUBMISSION REVIEW RECORD			1. REGISTRATION NUMBER				CYCLE	2. DATE RECEIVED		
			G359000-6					MO DAY YR 10 05 77		
3. 3CID PUBLICATION NECESSARY <input type="checkbox"/> YES <input type="checkbox"/> NO			4. PETITION NO.				5. RECEIVED PM TEAM			
							MO DAY YR 10 05 77			
6. METHOD OF SUPPORT <input type="checkbox"/> 2A <input checked="" type="checkbox"/> 2B <input type="checkbox"/> 2C			7. PRODUCT MANAGER <i>Banks</i>				NO.	8. PROJECTED RETURN		
							33	MO DAY YR		
9. DATE PULLED		10. DATE PUBLISHED		11. ACTION TYPE			CODE	12. OUTGOING DATE		
		11-15-76		Resubmission - data			52	MO DAY YR		
REV SEQ.	REVIEW TYPE CODE	REVIEW TYPE	REVIEWER CODE (Initials)	SIGNATURE OF REVIEWER	COM- MENT CODE	DATE REVIEW COMPLETED				
						MO	DAY	YR		
	A	REVIEWABILITY TEAM								
	B	PRODUCT MANAGER TEAM EFFICACY REVIEW								
	C	PRODUCT MANAGER TEAM HUMAN SAFETY REVIEW								
	D	PRODUCT MANAGER TEAM ENVIRONMENTAL SAFETY REVIEW								
	E	PRODUCT MANAGER TEAM RESUBMISSION REVIEW		<i>R6'D R Douglas</i>						
	F	PRODUCT MANAGER								
	G	INTERAGENCY REFERRAL								
	H	COST-BENEFIT REVIEW								
	I	PUBLIC COMMENTS REVIEW								
	J	EEE BRANCH INSECTICIDE EFFICACY								
	K	EEE BRANCH HERBICIDE EFFICACY								
	L	EEE BRANCH FUNGICIDE EFFICACY								
	M	EEE BRANCH RODENTICIDE EFFICACY								
✓	N	EEE BRANCH DISINFECTANT EFFICACY	<i>DIMP</i>	<i>Dm Partner</i>			11	2	15 77	
	O	CHEMISTRY BRANCH RESIDUE CHEMISTRY								
	P	EEE BRANCH ENVIRONMENTAL CHEMISTRY								
	Q	TOXICOLOGY BRANCH HUMAN SAFETY								
	R	EEE BRANCH ENVIRONMENTAL SAFETY								
	S									
	T									
PRODUCT MANAGER SIGNATURE				TYPE OF RESPONSE				CODE		
<i>James H. Banks</i>				<i>Pre Assigned (PA-1)</i>				30		

FEB 09 1978

IONICS, INCORPORATED
Attn: Walter Polens
P.O. BOX 99
Bridgeville, PA 15017

Gentlemen:

Subject : GENERAL IONICS MODEL MIVSH-8 BACTERIOSTATIC
WATER CONDITIONER
File Symbol 35900-G
Resubmission of October 5, 1977

The data show that the innocuous bacteria in the effluent water from the "Ionics Standard MIVSH-8 Water Conditioner" control unit increased during non-flow periods. However, this elevated bacterial level was transitory since a marked decrease in the bacterial level was noted after a flow period or a regeneration cycle. The data also show that the observed bacterial proliferation during non-flow periods was controlled by the silver-impregnated activated carbon filter media incorporated into the water conditioner unit. These data, therefore, provide presumptive evidence of intrinsic value for bacteriostatic activity of the product unit during non-flow periods. At this time, no determination will be made relative to efficacy of this product unit, in use, when recommended for processing municipally treated water.

The silver concentration in the water sampled from a specially designed outlet did not exceed 50 ppb. In use, the effluent water will not be expected to contain silver because the cation exchange resin should exchange out the silver cation. Presumably, the use of this product unit would not constitute a hazard.

The product referred to above will be acceptable for registration under the Federal Insecticide, Fungicide, and Rodenticide Act; provided, finished labeling is submitted incorporating the following revisions.

(1) The total percentage of inert ingredients must be declared on the label. Refer to item 1 of the A-3 RET CHEMISTRY CHECKLIST enclosure.

(2) Add an appropriate Net Contents statement to the label.

(3) Delete the use classification statement, "GENERAL CLASSIFICATION xxx with its labeling" from the label. This statement must appear in the manual where the use directions appear. Therefore, this statement should be placed immediately below the heading "INSTALLATION INSTRUCTIONS in the Homewwner's Manual.

(4) The use area, "for municipally treated water," and the pest site, "within the ion exchange softening filter medium," must be included with the claim "Inhibits the growth of bacteria."

(5) The claim for a "build-up of bacteria within the ion exchange softening filter medium during non-flow periods" must be qualified with a statement to indicate that the elevated bacterial level is a transitory phenomenon which is markedly decreased after a period of flow or a regeneration cycle.

(6) The directions for use must indicate that the silver-impregnated activated carbon filter media must be replaced in the water conditioner after 75,000 gallons of municipally treated water have been processed through the unit.

EPA Reg. No. 35900-3 is being reserved for this product. This must appear on the finished label. The "Notice of Registration" will be issued when five (5) copies of the acceptable finished (printed) labeling are submitted. Finished labeling is that which will be attached to or accompany the product (product label, instructions, literature, brochure, carton label, etc.) Refer to the attached A-79 Enclosure.

To expedite handling, please return the enclosed duplicate copy of this letter with your finished labeling.

If there is any doubt as to how to make the requested corrections on the labeling, please contact us or submit revised draft labeling for our comments prior to printing the finished labeling.

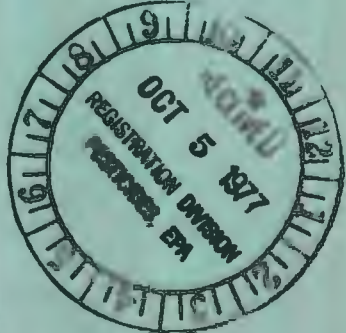

This letter does not constitute registration, and the product may not be lawfully marketed in ~~interstate~~ commerce until it is registered.

Sincerely,

JHB
James H. Banks
Product Manager 33
Disinfectants Branch
Registration Division (WH-567)

Enclosures
A-79 Encl.
Duplicate letter

WH-567:DIS:RGD:md:59040:Rm 321 2/8/78

U.S. ENVIRONMENTAL PROTECTION AGENCY OFFICE OF PESTICIDE PROGRAMS (WH-567) WASHINGTON, D.C. 20460 RESUBMISSION OF A PESTICIDE PRODUCT APPLICATION (Please read instructions on back of last page) C		1. REFERENCE CODE 35900-G		2. U.S. EPA USE ONLY - -	
		3. REGISTRATION NO.		4. PRODUCT MANAGER James Banks	
5. NAME AND ADDRESS OF APPLICANT (Include Zip Code) Ionics, Incorporated P.O. Box 99 Bridgeville, Pennsylvania 15017 <input type="checkbox"/> CHECK HERE IF THIS IS A NEW ADDRESS				6. TYPE OF RESUBMISSION (Check below for previous submission)	
				<input type="checkbox"/> APPL FOR NEW REGISTRATION <input type="checkbox"/> APPL FOR AMENDED REG'N <input type="checkbox"/> REGISTRATION RENEWAL <input type="checkbox"/> REREGISTRATION <input checked="" type="checkbox"/> RESUBMISSION	
8. PRODUCT NAME GENERAL IONICS MODEL MIVSH-8 BACTERIOSTATIC WATER CONDITIONER				7. DATE OF PREVIOUS EPA LETTER December 21, 1976 April 1, 1977 Phone call E. Brown 7/21/77	
9. EXPERIMENTAL PERMIT NO.					
10. SUBJECT OF RESUBMISSION (See Instructions) Submitting new test data, Change in ingredient quantities, Revised label and literature					
12. TYPES OF DATA SUBMITTED				FOR EPA USE ONLY	
<input type="checkbox"/> 01 NONE				1201	
<input checked="" type="checkbox"/> 02 PRODUCT CHEMISTRY				1202	
<input type="checkbox"/> 03 RESIDUE CHEMISTRY				1203	
<input type="checkbox"/> 04 ENVIRONMENTAL CHEMISTRY				1204	
<input type="checkbox"/> 05 EFFICACY				1205	
<input type="checkbox"/> 06 PHYTOTOXICITY				1206	
<input type="checkbox"/> 07 HUMAN SAFETY				1207	
<input type="checkbox"/> 08 DOMESTIC ANIMAL SAFETY				1208	
<input type="checkbox"/> 09 FISH AND WILDLIFE SAFETY				1209	
<input type="checkbox"/> 10 BENEFICIAL INSECT SAFETY				1210	
<input type="checkbox"/> 11 ACCIDENT EXPOSURE EXPERIENCE				1211	
<input type="checkbox"/> 12 OTHER (Specify)				1212	
<input type="checkbox"/> 13 OTHER (Specify)				1213	
NOTICE No new claims should be submitted as part of a resubmission. A resubmission must be limited to correcting an application as directed in the previous letter of rejection from the U.S. Environmental Protection Agency. New claims may be submitted as amendments on the appropriate form. Since this form does not contain the "Method of Support" and "Offer to Pay Statement" which are required for all new claims, any resubmission containing new claims cannot be processed and will be returned to the applicant.		13. CONTACT POINT Complete items directly below for identification of individual to be contacted, if necessary, to process this application.		14. RECEIVED - EPA REGISTRATION DIVISION ON THE DATE STAMPED BELOW. 	
		NAME Walter J. Polens			
TITLE Vice President					
TELEPHONE NO. (Include Area Code) (412) 343-1040					
15. SIGNATURE 		17. TITLE Vice President			
18. TYPED NAME Walter J. Polens		19. DATE SIGNED 9/30/77			

GENERAL IONICS
MODEL MIVSH-8
BACTERIOSTATIC WATER CONDITIONER
WITH HYGENE

Inhibits the growth of bacteria .

CAUTION: KEEP OUT OF REACH OF CHILDREN

EPA Reg. No.

EPA Est. No. 35900 PA 01

STORAGE OF HYGENE MATERIAL: Store in closed container which excludes moisture and chemical fumes.

GENERAL CLASSIFICATION: It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

ACTIVE INGREDIENT: SILVER AS METALLIC-----0.07%

INERT INGREDIENTS: CATION EXCHANGE RESIN-----80.00%

GRAVEL-----13.33%

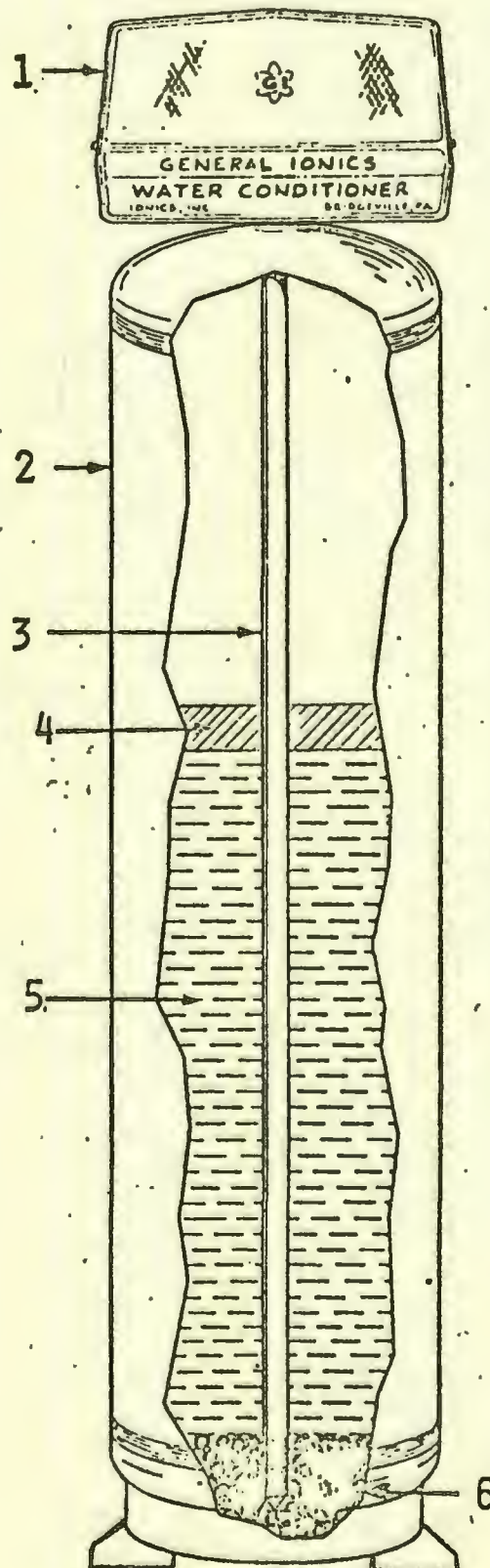
ACTIVATED CARBON-----6.60%

DIRECTIONS FOR USE: SEE HOMEOWNER'S MANUAL

DISPOSAL OF SPENT MEDIA: Remove Hygene media from top of filter bed and place in suitable container for disposing with trash.

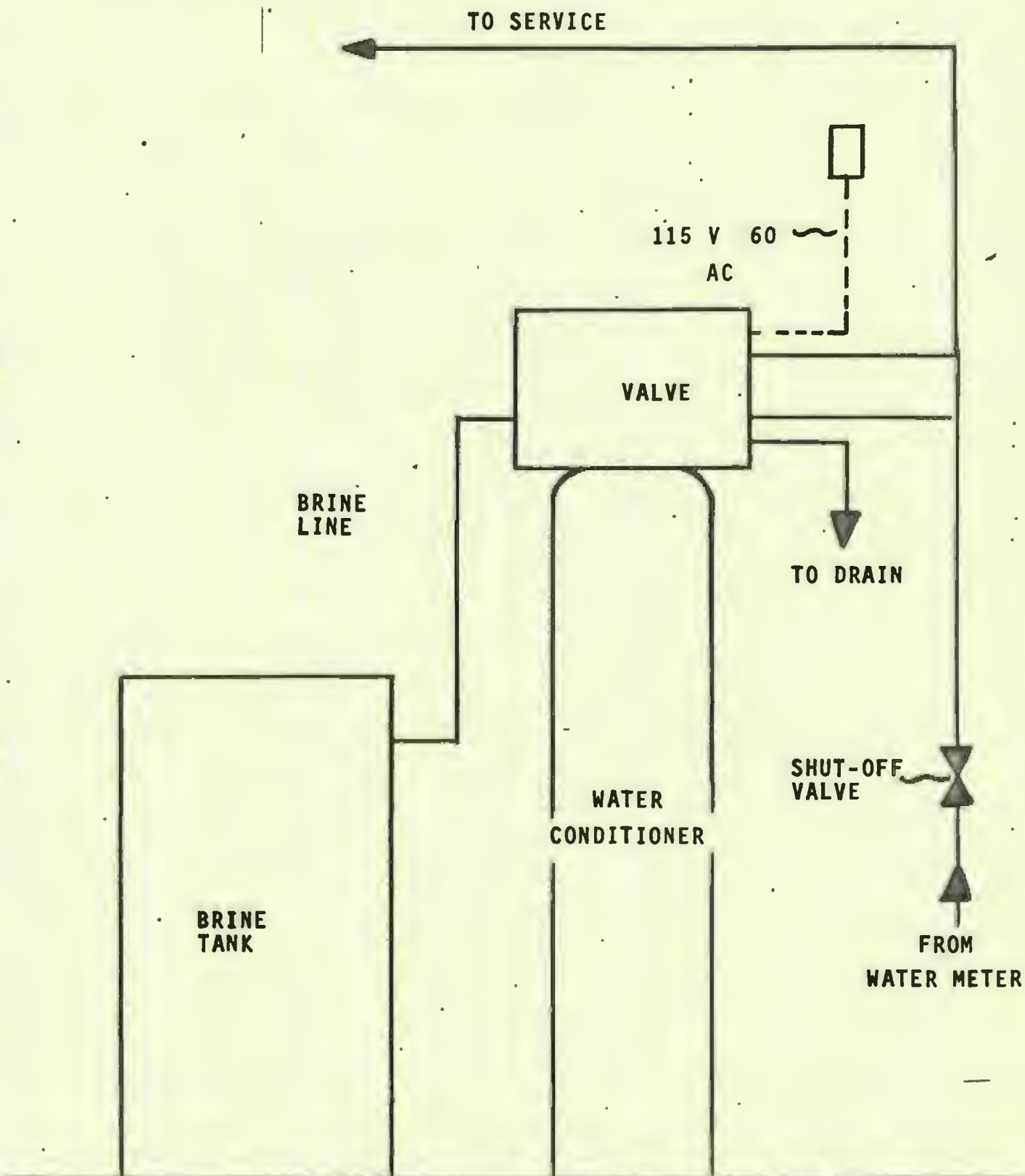
Another fine product by the manufacturers of General Ionics Water Conditioning Equipment
IONICS, INCORPORATED Routes 519 & 50 Bridgeville, Penna. 15017

Enclosure 1

GENERAL IONICS MODEL MIVSH-8
BACTERIOSTATIC WATER CONDITIONER

Model MIVSH	
Item	Description
1	Control Valve
2	Stainless Steel Tank
3	Distributor Tube
4	HYgene Bacteriostatic Filter Media
5	Ion Exchange Softening Resin
6	Gravel

TYPICAL INSTALLATION FOR GENERAL IONICS MODEL MIVSH-8 BACTERIOSTATIC
WATER CONDITIONER



QUESTIONS AND ANSWERS CONCERNING THE MODEL MIVSH BACTERIOSTATIC
WATER CONDITIONER

Q. What is a Bacteriostatic Water Conditioner?

A. A Bacteriostatic Water Conditioner is one which in addition to softening the water also inhibits the growth of bacteria.

Q. Is there a need to inhibit the growth of bacteria in already "potable" water?

A. Since "potable" water can, by law, contain a certain number of harmless bacteria indigenous to municipally treated water, the potential for a buildup or growth of these bacteria trapped within the ion exchange softening filter medium does exist.

Q. Why is there a buildup of bacteria in a water conditioning unit?

A. The low level of bacteria in the raw water along with organic compounds normally present in a water supply become trapped in the filter bed medium. After a period of time, the filter bed will contain considerable number of bacteria and in the presence of the organic compounds which become a source of nutrients for bacteria, this filter becomes a breeding place for bacterial growth.

- Q. What is in the Bacteriostatic Water Conditioner that inhibits the growth of bacteria within the filter medium?
- A. The inhibiting agent is HYgene (EPA Registered Bacteriostatic Water Filter Media). HYgene is a silver impregnated granular activated carbon. A layer of HYgene is placed on top (raw water inlet side) of the ion exchange softening resin inside the water conditioning unit. The top section of the filter bed is the area where excessive bacteria growth usually takes place, especially during non-flow periods when the water is not in use, such as overnight.

INSTALLATION INSTRUCTIONS

1. Select Location - The location selected must be convenient for drain facilities, electrical outlet and convenient for servicing and adding salt.
2. Unpacking - The Model MIVSH-8 Bacteriostatic Water Conditioner has been shipped complete in two cartons.
One carton contains the mineral tank which is preloaded with gravel bed, high capacity ion exchange resin and HYgene Bacteriostatic Water Filter Media. The control valve is mounted on top of this tank.
The second carton contains the salt storage tank and its components.
3. Turn main water supply off and drain system.
4. Cut the main supply line and remove approximately 6 inches of existing plumbing.
5. Remove control face plate and shroud. Place the mineral tank on the three plastic leveling legs and level.
6. Move bypass lever so indicator points to bypass position. Connect the main inlet line to the opening in the valve marked "In".
Connect the house service line to the opening marked "Outlet".
Connect drain line.
7. Turn main supply on. Customer will have tap water while installation is being completed.

8. Install salt storage tank. Assemble brine valve - connect brine line to control valve - add water to the salt storage tank. Add salt.
9. Pull bypass lever forward until indicator points to service position and then open a cold water faucet in kitchen sink or stationary tub to expel air. When there is a steady flow of water at the faucet, continue running at 3GPM for 5 minutes. Then press and hold the red button the timer. This disengages the drive gear. Turn the black knob on the large cycle dial to backwash position to expel air compressed in the unit. When there is a steady flow of water at the drain, continue running at 1.5 GPM for 10 minutes. Then again disengage the red button. Turn black knob and cycle valve to service position. Again open cold water tap at the kitchen sink or stationary tub. Continue running at a rate of 8.0 GPM for 10 minutes. If 8.0 GPM can not be achieved due to low line pressure, run water at maximum flow for a total of 80 gallons. Unit is now in service for use.

SUBMISSION REVIEW RECORD			1. REGISTRATION NUMBER		CYCLE	2. DATE RECEIVED		
3. 3CID PUBLICATION NECESSARY			4. PETITION NO.		5. RECEIVED PM TEAM			
6. METHOD OF SUPPORT			7. PRODUCT MANAGER		NO.	8. PROJECTED RETURN		
9. DATE PULLED		10. DATE PUBLISHED	11. ACTION TYPE		CODE	12. OUTGOING DATE		
REV. SEQ.	REVIEW TYPE CODE	REVIEW TYPE	REVIEWER CODE (Initials)	SIGNATURE OF REVIEWER	COM-MENT CODE	DATE REVIEW COMPLETED		
						MO	DAY	YR
	A	REVIEWABILITY TEAM						
	B	PRODUCT MANAGER TEAM EFFICACY REVIEW						
	C	PRODUCT MANAGER TEAM HUMAN SAFETY REVIEW						
	D	PRODUCT MANAGER TEAM ENVIRONMENTAL SAFETY REVIEW						
	E	PRODUCT MANAGER TEAM RESUBMISSION REVIEW						
	F	PRODUCT MANAGER						
	G	INTERAGENCY REFERRAL						
	H	COST-BENEFIT REVIEW						
	I	PUBLIC COMMENTS REVIEW						
	J	EEE BRANCH INSECTICIDE EFFICACY						
	K	EEE BRANCH HERBICIDE EFFICACY						
	L	EEE BRANCH FUNGICIDE EFFICACY						
	M	EEE BRANCH RODENTICIDE EFFICACY						
✓	N	EEE BRANCH DISINFECTANT EFFICACY	DMR	DM Portner		05	18	77
	O	CHEMISTRY BRANCH RESIDUE CHEMISTRY						
	P	EEE BRANCH ENVIRONMENTAL CHEMISTRY						
	Q	TOXICOLOGY BRANCH HUMAN SAFETY						
	R	EEE BRANCH ENVIRONMENTAL SAFETY						
	S							
	T							
PRODUCT MANAGER SIGNATURE				TYPE OF RESPONSE			CODE	

JUN 20 1977

Ionics Incorporated
Attn: Walter J. Polens
P.O. Box 99
Bridgeville, PA 15017

Subject: GENERAL IONICS MODEL MIVSH-8 BACTERIOSTATIC
WATER CONDITIONER
File Symbol 35900-G
Letter of May 4, 1977

Dear Mr Polens:

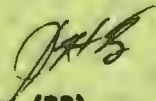
This is in response to the evaluation of the proposed test protocol:

The study to demonstrate efficacy of the silver incorporated in the water softener must be conducted with tap water having the characteristics which are known to cause a deleterious effect to the resin bed. The tap water defined in our letter of April 1, 1977, was suggested only because these characteristics represent conditions imperative to the use of a water softener. Any tap water with characteristic appropriate for a water softener, such as defined in your letter of May 4, 1977, may also be acceptable for the efficacy study provided the deleterious effect of the resin bed associated with the proliferation of the native bacteria in tap water can be established by an indicative physical measurement. The correlation between the bacterial population level and the deleterious effect on the resin bed must be demonstrated in order to evaluate the effectiveness of the silver as a preservative for the resin bed since the bacteriostatic action of silver inhibits but does not prohibit bacterial proliferation.

The problem intended to be controlled in the water softener by the incorporation of silver has not been clearly defined. The document "Quality Water At The Tap" submitted does not elucidate the deleterious effect in the resin bed which will be caused by the proliferation of bacteria; periodic backwashing appears to be all that is necessary to maintain the integrity of the bed in the water softener unit. The rationale of the statement in your letter "Aesthetically this buildup of bacteria within the bed is not desirable to many users of water softeners" is not comprehensible since the user has no means to detect the bacterial level within the resin bed.

Submission of data, which provide evidence of the deleterious effect on the resin bed associated with bacterial proliferation is recommended before testing this product in the water softener so that any appropriate modifications in testing, based on the information derived from these control data, may be included in the protocol.

Sincerely,


James H. Banks
Product Manager (33)
Disinfectants Branch
Registration Division (WH-567)

WH-567:DIS:JHBanks:eag:rm 219 WSME x68815 6/16/77

EEE BRANCH REVIEW

DATE: IN _____ OUT _____ IN _____ OUT _____ IN 5/17/77 OUT 5/18/77
FISH & WILDLIFE ENVIRONMENTAL CHEMISTRY EFFICACY

FILE OR REG. NO. 35900-G

PETITION OR EXP. PERMIT NO. _____

DATE DIV. RECEIVED 5/10/77

DATE OF SUBMISSION 5/04/77

DATE SUBMISSION ACCEPTED _____

TYPE PRODUCT(S): I, (D,)H, F, N, R, S Bacteriostatic Water Softener

PRODUCT MGR. NO. 33

PRODUCT NAME(S) General Ionics Model IVSH-8 Bacteriostatic Water Conditioner

COMPANY NAME Ionics, Inc.

SUBMISSION PURPOSE Proposed protocol

CHEMICAL & FORMULATION _____

200.0 Introduction

200.1 Use

Bacteriostatic Water Softener

200.2 Background information

This submission of May 4, 1977 is in response to our letter of April 1, 1977 which gives an evaluation of a proposed test protocol to demonstrate efficacy of a bacteriostatic Water Softener

202.0 Recommendations

204.0 Response to the evaluation of the proposed test protocol:

The study to demonstrate efficacy of the silver incorporated in the water softener must be conducted with tap water having the characteristics which are known to cause a deleterious effect to the resin bed. The tap water defined in our letter of April 1, 1977, was suggested only because these characteristics represent conditions imperative to the use of a water softener. Any tap water with characteristics appropriate for a water softener, such as defined in your letter of May 4, 1977, may also be acceptable for the efficacy study provided the deleterious effect of the resin bed associated with the proliferation of the native bacteria in tap water can be established by an indicative physical measurement. The correlation between the bacterial population level and the deleterious effect on the resin bed must be demonstrated in order to evaluate the effectiveness of the silver as a preservative for the resin bed since the bacteriostatic action of silver inhibits but does not prohibit bacterial proliferation.

The problem intended to be controlled in the water softener by the incorporation of silver has not been clearly defined. The document "Quality Water At The Tap" submitted does not elucidate the

deleterious effect in the resin bed which will be caused by the proliferation of bacteria; periodic backwashing appears to be all that is necessary to maintain the integrity of the bed in the water softener unit. The rationale of the statement in your letter "Aesthetically this buildup of bacteria within the bed is not desirable to many users of water softeners" is not comprehensible since the user has no means to detect the bacterial level within the resin bed.

Submission of data, which provide evidence of the deleterious effect on the resin bed associated with bacterial proliferation, is recommended before testing this product in the water softener so that any appropriate modifications in testing, based on the information derived from these control data, may be included in the protocol.

Dorothy M Portner *WSW*
Dorothy M. Portner
Efficacy Section
Efficacy and Ecological Effects Branch

5/18/77

[Signature]



IONICS
IONICS, INCORPORATED

P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE A. C. 412 343-1040 TWX 5106973299

May 4, 1977

U. S. Environmental Protection Agency
401 M Street S. W.
Washington, D. C. 20460

Attention: Mr. James H. Banks, Product Manager 33
Disinfectants Branch
Registration Division (WH-567)

Subject: General Ionics Model MIVSH-8 Bacteriostatic Water Conditioner
File Symbol 35900-G
Your Letter of April 1, 1977

Gentlemen:

This is in response to your letter of April 1, 1977 in answer to my letter of February 1, 1977 listing revisions that must be incorporated into our proposed protocol to provide meaningful data.

1. Ionics respectfully requests an exception to using the water that you mentioned in your letter of April 1, 1977 of the following characteristics:

Hardness as CaCO_3 - at least 200 mg/l
Alkalinity as CaCO_3 - 150 mg/l
Total dissolved solids - 500 mg/l
pH - 7.5-8.5
Temperature - 20-25C

We respectfully request to be allowed to use the Pittsburgh municipally treated tap water with the following general characteristics:

Hardness as CaCO_3 - 85-125 mg/l
Alkalinity as CaCO_3 - 20-40 mg/l
Total dissolved solids - Approximately 150 mg/l
pH - 7.5-8.0
Temperature - 15.6 - 26.7 C

- Our reason for this request is that it would be very expensive for the Cyrus Rice Laboratories to produce this kind of water and it is almost impossible for them to produce it in the amounts that we need for the testing. It would seem logical to use regular tap water when available rather than artificially prepared water since the units are sold on municipally treated tap waters. It is our contention that the difference in the hardness or total dissolved solids would have no bearing on the tests. Therefore, either water would be acceptable and we would be pleased to use the water as suggested by you if it were not too expensive and impossible to make in such large quantities.

Attention: Mr. James H. Banks, Product Manager 33

We enclose with this letter a booklet entitled "Quality Water at the Tap" published by the Water Conditioning Foundation which shows on Page 6 that in some cases water, even slightly hard (1 to 3 1/2 grains and on up) could and should be softened.

2. We take no exceptions.

3. We take no exceptions.

4. We take no exceptions.

5. Enclosed with this letter you will find our procedures and calculations used to determine the remaining silver to estimate the life of the silver impregnated media.

6. Our reasoning for wanting to make a bacteriostatic water softener is as follows. In the 30 years that we have been manufacturing water softeners we have become aware of the fact that ion exchange resins not only remove hardness but also remove iron, dirt and organics. They also entrap some total count bacteria. Since they do entrap bacteria and some organic compounds which become a source of nutrient for the bacteria, the bed becomes a breeding place for bacterial growth - especially during non-flow periods when the water is not in use such as overnight. This does have a deleterious effect on the resin bed. Aesthetically this buildup of bacteria within the bed is not desirable to many users of water softeners. It is our feeling that the users of these softeners should be offered the opportunity of having a bacteriostatic unit available to them. In many of our discussions with home owners at home shows and county fairs we found that they have shown an interest in purchasing a softener that would be bacteriostatic - or, in other words, would inhibit the growth of bacteria within the resin bed.

It is true that when a water softener regenerates and is backwashed, some of the bacteria would be eliminated; but in most cases, regeneration takes place every 12 days. In between the first and twelfth day the buildup accumulates. Our bacteriostatic water softener would prevent this buildup.

As we proceed with the testing of the MIVSH-8 and we comply with 2 F as mentioned in your letter of April 1, 1977, this buildup of bacteria in the control unit will be demonstrated.

U. S. Environmental Protection Agency

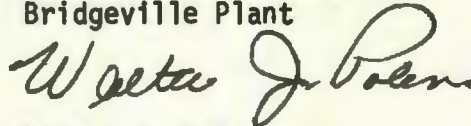
May 4, 1977
Page 3

Attention: Mr. James H. Banks, Product Manager 33

We respectfully request a prompt answer so that we can begin the testing for the registration of the MIVSH-8 unit.

Very truly yours,

IONICS, INCORPORATED
Bridgeville Plant



Walter J. Polens
Vice President

WJP:mle

Enclosures: Booklet "Quality Water at the Tap"
"Method for Determining Total Silver Content of HYgene"

cc: Mr. James Touhey
Chief, Efficacy and Ecological Effects Branch
Registration Division (WH-567)
U. S. Environmental Protection Agency

Mr. J. D. Collins - Ionics

PLEASE NOTIFY

THE DATA MANAGER

OF ANY ADDITIONS

MADE TO THIS

JACKET.

THANK YOU

PLEASE DO NOT REMOVE THIS SHEET

REPORT OF TELEPHONE CALL OR VISITOR			NOTE: Complete this form. Write "NA" where not applicable.
INCOMING CALL	<input checked="" type="checkbox"/>	VISITOR	DATE April 19, 1977
OUTGOING CALL	<input type="checkbox"/>	CONGRESSIONAL	TIME OF CALL 2:05 P.M.
NAME AND ADDRESS OF CALLER OR VISITOR Mr. Polens of Ionics with Mr. Brown, Mr. Banks, Ms. Portner and Ms. Douglas Ionics, Inc. P.O. Box 99 Bridgeville, PA			PHONE NO. (Include Area Code or IDS No.)
			REGISTRATION, ID NO. OR FILE SYMBOL 35900-G
			DATE OF LATEST SUBMISSION
BRIEF SUMMARY OF CONVERSATION Mr. Polens main concern in reference to 35900-G is the quality of the water required for developing data as indicated in our letter of April 1, 1977. He indicated that it would be too expensive to make the water with the parameters specified: he would rather use tap water. Mr. Polens inquired about the status of the FAP 5H5079, File Symbols 35900-U, L and A and 39938-R.			
ACTION TAKEN OR RECOMMENDED It was decided that Mr. Polens should submit a written reponse to each item in our letter of April 1, 1977 and raise any objections he has to a particular item. Alternatively, it was suggested that he could select an area where there is very hard water and do in-use testing on his water conditioner. Status of the petition and applications was given to Mr. Polens.			
RECORDED BY (Name) Ms. Ruth G. Douglas		REFERRED TO (Name)	

75 days

SUBMISSION REVIEW RECORD			1. REGISTRATION NUMBER			CYCLE	2. DATE RECEIVED		
3. 3CID PUBLICATION NECESSARY <input type="checkbox"/> YES <input type="checkbox"/> NO			4. PETITION NO.			5. RECEIVED PM TEAM			
6. METHOD OF SUPPORT <input type="checkbox"/> 2A <input checked="" type="checkbox"/> 2B <input type="checkbox"/> 2C			7. PRODUCT MANAGER			NO.	8. PROJECTED RETURN		
9. DATE PULLED		10. DATE PUBLISHED	11. ACTION TYPE			CODE	12. OUTGOING DATE		
REV. SEQ.	REVIEW TYPE CODE	REVIEW TYPE	REVIEWER CODE (Initials)	SIGNATURE OF REVIEWER		COM-MENT CODE	DATE REVIEW COMPLETED		
							MO	DAY	YR
	A	REVIEWABILITY TEAM							
	B	PRODUCT MANAGER TEAM EFFICACY REVIEW							
	C	PRODUCT MANAGER TEAM HUMAN SAFETY REVIEW							
	D	PRODUCT MANAGER TEAM ENVIRONMENTAL SAFETY REVIEW							
	E	PRODUCT MANAGER TEAM RESUBMISSION REVIEW	RGID	R Douglas					
	F	PRODUCT MANAGER							
	G	INTERAGENCY REFERRAL							
	H	COST-BENEFIT REVIEW							
	I	PUBLIC COMMENTS REVIEW							
	J	EEE BRANCH INSECTICIDE EFFICACY							
	K	EEE BRANCH HERBICIDE EFFICACY							
	L	EEE BRANCH FUNGICIDE EFFICACY							
	M	EEE BRANCH RODENTICIDE EFFICACY							
X	N	EEE BRANCH DISINFECTANT EFFICACY	DMIP	DM Portner			013	019	717
	O	CHEMISTRY BRANCH RESIDUE CHEMISTRY							
	P	EEE BRANCH ENVIRONMENTAL CHEMISTRY							
	Q	TOXICOLOGY BRANCH HUMAN SAFETY							
	R	EEE BRANCH ENVIRONMENTAL SAFETY							
	S								
	T								
PRODUCT MANAGER SIGNATURE			TYPE OF RESPONSE					CODE	
James H. Banks			Regular Letter					RHR	

APR 01 1977

IONICS, INCORPORATED
Attn: Walter J. Polens
P.O. Box 99
Bridgeville, PA. 15017

Gentlemen:

Subject : General Ionics Model MINE-8 Bacteriostatic Water
Conditioner
File Sybbl 35900-G
Letter of February 1, 1977

This is in response to your submission dated February 1, 1977 indicating the proposed testing for the subject product. The following revisions must be incorporated into the proposed protocol to provide meaningful data.

1. Testing must be conducted in accordance with the directions recommended for the water softener under stringent conditions of use reflected by defined tap water with the following key characteristics:

Hardness as CaCO_3 - at least 200 mg/l
Alkalinity as CaCO_3 - 150 mg/l
Total dissolved solids - 500 mg/l
pH - 7.5-8.5
Temperature - 20-25 C

2. The study must be designed on the basis of the use pattern with an assumed daily gallonage consumption of 300-400 gallons (representative daily usage for a family of 4) and the appropriate regeneration cycle for the defined water and gallonage usage specified. Assuming a regeneration cycle after every 1500-2000 gallons, the following sampling interval frequency for bacteriological and silver release determinations would reflect the use pattern for this product.

- A. Initial determinations of the influent and effluent
- B. Determinations after a 1500-2000 gallon tap water challenge
- C. Determinations after a 24 or 48-hour holding period
- D. Regeneration Cycle
- E. Determinations immediately after a regeneration cycle

F. Repeat steps(b) through(e) at least 4 times (which will represent the estimated 10% filter, life of the silver impregnated media) or until bacterial proliferation is clearly indicated in the control water softener. The phenomenon of bacterial "build-up" must be demonstrated in order to evaluate the effectiveness of this product.

3. To readily detect the "build-up" phenomenon, municipally treated tap water with a high level of innocuous bacteria should be used and/or augmented with additional innocuous bacteria indigenous to municipally treated tap water to insure a sufficiently high bacterial level challenge (identifying the genera of bacteria present).

4. The bacteriological and silver release methodology indicated in the "Interim Requirements for Registration of Bacteriostatic Water Treatment Units for Home Use" are relative to this study but not the testing schedule indicated in Tables III and IV.

5. The procedure and calculations used to determine the remaining silver as a basis for estimating the life of the silver impregnated media must be provided.

6. Since the problems caused by bacterial proliferation in the water softener probably can not be demonstrated in this limited study, documentation, which provides evidence of the problems incurred such as deterioration or impairment of the water softener, must be submitted in order to establish the intended function of incorporating a bacteriostat in the water softener.

The preliminary data submitted with your letter of February 1, 1977 are inconclusive since even the highest counts reported are within the acceptable level for innocuous bacteria in municipally treated tap water.

Sincerely,

James H. Banks *JHB*
Product Manager 33
Disinfectants Branch
Registration Division (WH-567)

WH-567:DIS:RCD:ml:59040:Rm 321

3/30/77



IONICS
IONICS, INCORPORATED

P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE A. C. 412 343-1040 TWX 5106973299

February 1, 1977

CERTIFIED MAIL

Mr. James H. Banks, Product Manager (33)
Disinfectants Branch
Registration Division (WH-567)
U. S. Environmental Protection Agency
401 M Street S. W.
Washington, D. C. 20460

Subject: General Ionics Model MIVSH-8
Bacteriostatic Water Conditioner
File Symbol 35900-G
Your Letter of December 21, 1976

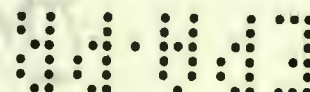
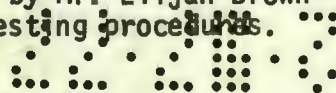
Dear Mr. Banks:

This is in response to your letter of December 21, 1976 relative to the proposed testing for the above referenced equipment as discussed in my meeting held with you and your personnel on December 2, 1976.

In your letter you asked for new calculations on the silver. We intend to send this along with the test data that we will be generating from suggested revised testing that is enclosed with this letter. At that time we will also send you a new revised label. This letter is the preliminary letter as requested by you for your review before we begin any testing so that there won't be any misunderstandings regarding the procedure.

Actually, this letter is in reference to Item 2 of your letter of December 21, 1976 concerning the data requirements.

- (A) We have enclosed with this letter the proposed procedure that we intend to use in developing the test data.
- (B) This is incorporated in the proposed test procedures. We have also enclosed previous data that we had developed to show that a water softener without our HYgene will develop a high bacteria count.
- (C) The enclosed procedure provides for testing 10% of the recommended gallonage and the remaining silver being stripped to verify the 90% remaining filter life.
- (D) This 450-gallon challenge was set up by Mr. Elijah Brown and would be eliminated in the new testing procedures.



Mr. James H. Banks, Product Manager 33
U. S. Environmental Protection Agency

February 1, 1977
Page 2

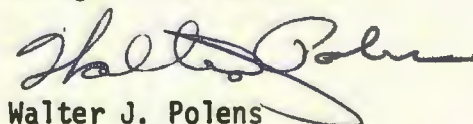
- (E) The proposed procedures provide for testing the chemical analysis of the tap water being used.

We respectfully request your prompt attention to the enclosed procedures so that we can start this testing and submit our data for registration. Our original contact with the EPA in reference to this registration goes all the way back to May of 1976 and is now 9 months in process. We, therefore, would like very much to expedite this.

We thank you for your usual prompt attention.

Very truly yours,

IONICS, INCORPORATED
Bridgeville Plant



Walter J. Polens
Vice President

WJP:mle

Enclosures: "Proposed Procedure For Evaluation of General Ionics
Model MIVSH-8 Bacteriostatic Water Conditioner"

"Tests To Determine Total Bacteria Growth In Water Softener Bed"

44-3886

44-843

PROPOSED PROCEDURE FOR EVALUATION OF GENERAL IONICS
MODEL MIVSH-8 BACTERIOSTATIC WATER CONDITIONER

- I. Install three (3) General Ionics Model MIVSH-8 Bacteriostatic Water Conditioners containing 4.0 lbs. gravel, 0.67 cu. ft. of cation exchange water softener resin, and 115 cu. in. (2.0 lbs.) of HYgene Bacteriostatic Water Filter Media (EPA Reg. No. 35900-2). Also install three (3) control units containing the same volume of gravel and resin less the HYgene product.
- II. The units are filled with tap water upflow at 1.5 gpm to expel all excess air. When steady stream of water appears in the backwash effluent, the flow is reversed to downflow (service) at 8 gpm for 5 minutes to compact the mineral bed.
- Units are now in operation to begin evaluation.
- III. The service flow rate for the General Ionics Model MIVSH-8 Bacteriostatic Water Conditioner is 8.0 gpm with a life expectancy for the HYgene media of 84,500 gallons. In accordance with Mr. James Banks' letter of December 21, 1976, however, these units will be tested to 10% of the recommended gallonage because of the large volumes of water required for total exhaustion. The HYgene media will then be removed from the test units and stripped of remaining silver to verify that 90% of the filter life remains.

Sampling and testing schedule will be in accordance with Table I of the Interim Requirements For Registering Bacteriostatic Water Treatment Units For Home Use. Volume put through for the time intervals required will be as follows:

- | | | |
|---------------------------|---|--|
| 1. Start | - | First effluent following the 5 minute downflow rinse |
| 2. At 25% of Filter Life | - | 2,113 Gallons |
| 3. At 50% of Filter Life | - | 4,225 Gallons |
| 4. At 75% of Filter Life | - | 6,334 Gallons |
| 5. At 100% of Filter Life | - | 8,450 Gallons |

- V. Following the holding periods, all effluent samples will be collected immediately after 3 gallons of water has passed through the filter. This sample will be most representative of the bacteria growth taking place in the top area of the filter bed. (See Table II in attached study.)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150

VI. Bacteriological and chemical testing procedures and conditions will be according to the Interim Requirements with the following exceptions:

1. Municipally treated tap water with a total dissolved solids content of approximately 150 mg/l; pH - 7.5 to 8.0; Hardness - 85 to 125 mg/l; Alkalinity - 20 to 40 mg/l; will be used as influent water throughout this study. This water is recommended because a softener would normally be installed on water with the above analysis.
2. Since our tap water contains a relatively high number of micro-organisms, the seeding with "artificially contaminated" water will not be necessary. (We understand that such permission was given to C.W. Rice, Div. of NUS Corp. by Mrs. Dorothy Portner of EPA.)
3. A water softener in normal operation is periodically put through a regeneration cycle which includes a backwash, injection of 10% brine solution downflow and rinse. The unit then goes back into service and as water is run through the unit, it not only removes hardness but also removes many other organics that are in the water supply. These organics act as a food for total count bacteria in the municipal tap water supply. After a softener sits without drawing of water overnight, there is an increase in the bacteria count. If a family were to leave for a whole weekend, when they come back, the total count is extremely high. The regeneration that we mentioned above will remove a certain amount of this buildup of bacteria and also a certain amount of the organics that the bacteria feed upon. But again, this cycle, after regeneration, is built up and becomes a hazard. To demonstrate the effect that the regeneration cycle has on the bacteria growth and to demonstrate the effect of the buildup after each regeneration, two regenerations will be added to this study. These regenerations will be initiated at 38% (3,210 gallons) and 66% (5,577 gallons) of the filter life. Before the regeneration, the filters will be given a 24 hour holding period at which time effluent samples will be collected and tested for micro-organism count and silver concentration. Immediately after the regenerations, effluent samples will be collected and tested for a micro-organism count and silver concentration.

VII. All test data will be reported in accordance with Tables III and IV of the Interim Requirements.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150

TESTS TO DETERMINE TOTAL BACTERIA GROWTH IN WATER SOFTENER BED

- I We have in our file records of bacteria tests run on the well water supply of Ron Schmidt (home well). These tests show a fairly high total bacteria count.

In an attempt to determine the bacteria growth in a water softener bed during extended non-flowing hours (such as overnight), an MIV-8 Water Conditioner was installed at the Schmidt home.

Water samples were collected in the mornings after overnight non-use and at two other occasions after 28 and 48 hour periods to show buildup over weekend. These samples were delivered to our lab for total bacteria counts. In attempt to get samples from near top of resin bed, three gallon of water was allowed to pass through unit before sample collection.

Results of these tests are as follows:

TABLE I

Date	Non-Flow Hours	Total Bacteria Count/100 ml	
		Raw	From Softener
7/3/73	10	1000	2,400
7/5/73	48	1600	50,000
7/11/73	8	780	3,250
7/18/73	28	700	56,000
7/19/73	8	800	7,100
7/20/73	8	650	2,450
7/26/73	8	200	2,150
7/27/73	8	100	4,350
7/30/73	8	700	4,800
8/6/73	8	250	4,100

4483

8883

- II In attempt to learn at what levels in the ion exchange water softener bed the highest growth of bacteria occurs, samples were collected at different time intervals while flowing at approximately 1 gpm.

TABLE II

Date	Non-Flow Hours	Sampling Time	Total Bacteria Count	
			Raw	From Softener
9/24/73	8	1.0 min.	475	700
		1.5 min.		650
		2.0 min.		3,100
		2.5 min.		2,250
		3.0 min.		4,000
		3.5 min.		4,000
9/26/73	8	1.0 min.	700	1,050
		2.0 min.		2,700
		3.0 min.		6,000
		4.0 min.		4,800

The above table indicates that the samples collected after 3 gallon of effluent contained the highest number of organisms and is, therefore, representative of the top inlet portion of the filter bed.

44.48.3

44.44.3

III Two (2) pound of HYgene media was placed on top of the water softener resin bed to determine what effect the HYgene would have on the growth of bacteria.

Data:

TABLE III

Data	Non-Flow Hours	Total Bacteria Count/100 ml	
		Raw	* From Softener
10/29/73	8	920	260
11/1/73	10	420	95
11/6/73	6	1000	60
11/8/73	8	470	100
11/14/73	8	780	400
11/20/73	11	310	95
11/30/73	14	920	110
1/4/74	8	650	140
1/11/74	7	500	95
1/18/74	8	625	200

* Sample collected after 3 gallon of effluent following non-flow period.

EEE BRANCH REVIEW

DATE: IN _____ OUT _____ IN _____ OUT _____ IN 2/17/77 OUT 3/9/77
FISH & WILDLIFE ENVIRONMENTAL CHEMISTRY EFFICACY

FILE OR REG. NO. 35900-6
PETITION OR EXP. PERMIT NO. _____
DATE DIV. RECEIVED 2-7-77
DATE OF SUBMISSION 2-1-77
DATE SUBMISSION ACCEPTED _____
TYPE PRODUCT(S): I, (D,) H, F, N, R, S Bacteriostatic Water Softener
PRODUCT MGR. NO. 33
PRODUCT NAME(S) General Ionics Model IVSH-8 Bacteriostatic Water Conditioner
COMPANY NAME Ionics, Inc.
SUBMISSION PURPOSE Proposed Protocol
CHEMICAL & FORMULATION _____

200.0 Introduction

200.1 Use: Bacteriostatic Water Softener

200.2 Background Information: The submission of a proposed test protocol is in response to our letters of November 5, 1966 and December 21, 1976.

200.2.1 Factors affecting amount/type of data required:
The tap water used to challenge this product should have characteristics known to cause scale build-up. Water Supply Division suggested the key characteristics of the tap water defined in 204.0 below which would warrant the need for a water softener.

204.0 Evaluation of proposed protocol

The following revisions must be incorporated into the proposed protocol to provide meaningful data.

1. Testing must be conducted in accordance with the directions recommended for the water softener under stringent conditions of use reflected by defined tap water with the following key characteristics:

Hardness as CaCO_3 - at least 200 mg/l
Alkalinity as CaCO_3 - >150 mg/l
Total dissolved solids - >500 mg/l
pH - 7.5-8.5
Temperature - 20-25°C

2. The study must be designed on the basis of the use pattern with an assumed daily gallonage consumption of 300-400 gallons (representative daily usage for a family of 4) and the appropriate regeneration cycle for the defined water and gallonage usage specified. Assuming a regeneration cycle after every 1500-2000 gallons, the following sampling interval frequency for bacteriological and silver release determinations would reflect the use pattern for this product.

- a. Initial determinations of the influent and effluent
 - b. Determinations after a 1500-2000 gallon tap water challenge
 - c. Determinations after a 24 or 48-hour holding period
 - d. Regeneration Cycle
 - e. Determinations immediately after a regeneration cycle
 - f. Repeat steps (b) through (e) at least 4 times (which will represent the estimated 10% filter life of the silver impregnated media) or until bacterial proliferation is clearly indicated in the control water softener. The phenomenon of bacterial "build-up" must be demonstrated in order to evaluate the effectiveness of this product.
3. To readily detect the "build-up" phenomenon, municipally treated tap water with a high level of innocuous bacteria should be used and/or augmented with additional innocuous bacteria indigenous to municipally treated tap water to insure a sufficiently high bacterial level challenge (identifying the genera of bacteria present).
 4. The bacteriological and silver release methodology indicated in the "Interim Requirements for Registration of Bacteriostatic Water Treatment Units for Home Use" are relative to this study but not the testing schedule indicated in Tables III and IV.
 5. The procedure and calculations used to determine the remaining silver as a basis for estimating the life of the silver impregnated media must be provided.
 6. Since the problems caused by bacterial proliferation in the water softener probably can not be demonstrated in this limited study, documentation, which provides evidence of the problems incurred such as deterioration or impairment of the water softener, must be submitted in order to establish the intended function of incorporating a bacteriostat in the water softener.

The preliminary data submitted with your letter of February 1, 1977 are inconclusive since even the highest counts reported are within the acceptable level for innocuous bacteria in municipally treated tap water.

Dorothy M. Portner

Dorothy M. Portner
3/9/77

Efficacy Section
Efficacy and Ecological Effects Branch

2014 Jay

SUBMISSION REVIEW RECORD			1. REGISTRATION NUMBER			CYCLE	2. DATE RECEIVED			
3. 3CID PUBLICATION NECESSARY <input type="checkbox"/> YES <input type="checkbox"/> NO			4. PETITION NO.			5. RECEIVED PM TEAM				
6. METHOD OF SUPPORT <input type="checkbox"/> 2A <input type="checkbox"/> 2B <input type="checkbox"/> 2C			7. PRODUCT MANAGER			NO.	8. PROJECTED RETURN			
9. DATE PULLED		10. DATE PUBLISHED	11. ACTION TYPE			CODE	12. OUTGOING DATE			
REV SEQ.	REVIEW TYPE CODE	REVIEW TYPE	REVIEWER CODE (Initials)	SIGNATURE OF REVIEWER		COM- MENT CODE	DATE REVIEW COMPLETED			
							MO	DAY	YR	
✓	A	REVIEWABILITY TEAM	JH	JH Hayley		03	12	96	24	
	B	PRODUCT MANAGER TEAM EFFICACY REVIEW								
	C	PRODUCT MANAGER TEAM HUMAN SAFETY REVIEW								
	D	PRODUCT MANAGER TEAM ENVIRONMENTAL SAFETY REVIEW								
	E	PRODUCT MANAGER TEAM RESUBMISSION REVIEW	RGD	conferred w D. Portner R Douglas			12	14	76	
	F	PRODUCT MANAGER								
	G	INTERAGENCY REFERRAL								
	H	COST-BENEFIT REVIEW								
	I	PUBLIC COMMENTS REVIEW								
	J	EEE BRANCH INSECTICIDE EFFICACY								
	K	EEE BRANCH HERBICIDE EFFICACY								
	L	EEE BRANCH FUNGICIDE EFFICACY								
	M	EEE BRANCH RODENTICIDE EFFICACY								
	N	EEE BRANCH DISINFECTANT EFFICACY								
	O	CHEMISTRY BRANCH RESIDUE CHEMISTRY								
	P	EEE BRANCH ENVIRONMENTAL CHEMISTRY								
	Q	TOXICOLOGY BRANCH HUMAN SAFETY								
	R	EEE BRANCH ENVIRONMENTAL SAFETY								
	S									
	T									
PRODUCT MANAGER SIGNATURE			TYPE OF RESPONSE						CODE	

DEC 21 1976

IONICS, INC.
Attn: Walter J. Polens
P.O. Box 99
Bridgeville, PA 15017

Gentlemen:

Subject : GENERAL IONICS MODEL MIVSH-8
BACTERIOSTATIC WATER CONDITIONER
File Symbol 35900-G
Letter November 17, 1976

This is in response to the letter referred to above in conjunction with the meeting held on December 2, 1976.

1. Paragraph 1 of our letter of November 3, 1976 was garbled. The calculation is as follows:

$$\text{Percentage silver} = \frac{(\text{Wt. Hygene}) \times (0.0105) \times 100}{\text{Wt. Hygene Plus Wt. } \blacksquare \text{ plus Wt. of gravel}}$$

Therefore,

$$\begin{aligned} \% \text{ silver} &= \frac{0.9 \times 0.0105 \times 100}{0.9 + 27.5 + 4.0} \\ &= \frac{0.9 \times 1.05}{32.4} \\ &= 0.02917\% \end{aligned}$$

Explain how you arrived at 0.0095% metallic silver.

You must submit revised labels showing active ingredient.

Silver as metallic	0.02917%
Inert ingredients	99.97083%

Inert ingredient information may be entitled to confidential treatment

2. In reference to our discussion on December 2, 1976 of items 3, 4, and 5 concerning data requirements, the following determinations were made:

(A) The actual procedure intended to be used in developing the data for this product should be submitted to us for comment prior to testing.

(B) The data must establish the purpose of incorporating silver in this water softener product. This can be demonstrated by a comparative in-use or simulated in-use study of the water softener with and without the silver impregnated filtering media to show that the product with silver is effective when used as directed. The testing must be adequate to demonstrate that this phenomenon can be repeated, e.g. parallel testing of 3 units with silver and 3 units (control) without silver.

(C) In lieu of testing the recommended lifetime of the filter directly, due to the large gallonage of water involved, the filter must be tested with at least 10% of the recommended gallonage then the silver should be stripped from the filter to verify that a 90% filter life remains.

(D) Indicate in writing the correlation between the 450-gallon water challenge to the in-use situation for this product.

(E) The chemical analysis of the tap water tested must also be submitted.

Again we emphasize that the protocol for developing data to satisfy the efficacy requirements for this product should be submitted to us for review before you begin testing so there won't be any misunderstanding regarding the procedure.

Sincerely,

James H. Banks
Product Manager 33
Disinfectants Branch
Registration Division (WH-567)

WH-567-DIS:RGD:md:59040:Rm 321

12/17/76



IONICS
IONICS, INCORPORATED

P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE A. C. 412 343-1040 TWX 5106973299

November 17, 1976

CERTIFIED MAIL

Mr. James H. Banks, Product Manager 33
Disinfectants Branch (WH-567)
Registration Division
U.S. Environmental Protection Agency
401 M Street S.W.
Washington, D. C. 20460

Subject: General Ionics Model MIVSH Bacteriostatic Water Conditioner
File Symbol 35900-G
Application of October 7, 1976 and EPA's Letter of Nov. 5, 1976

Dear Mr. Banks:

In your letter to me dated November 5, 1976 in reference to the above subject you state that our application for registration is deficient.

Ionics, Incorporated has made changes it felt were justified but we have taken exception to some of your "Deficiencies".

(1) The revised ingredient statement that you have requested is as follows:

Active Ingerdient - Metallic Silver 0.0095%

Inert Ingredients

Activated Carbon 2.7683%

[REDACTED]

Gravel

12.3457%

100.0000%

(2) The weight of the HYgene, [REDACTED] and Gravel are as follows:

HYgene (1.05% Silver)

0.9 lb.

[REDACTED]

Gravel

4.0 lb.

(3) Ionics claims exception to this request for the following reasons:

On June 16, 1976 Ionics, Incorporated wrote a letter to Mr. E. F. Brown in reference to the registration of this product along with drawings and complete information. We did this so that once we set up the testing procedures this money and time would not be wasted. A copy of this letter is enclosed. This is our Enclosure #1.

Our Enclosure #2 is a Rapidform Letter-Liminator from our Mr. John Collins to Mr. Walter Polens in reference to a phone conversation with Mr. Brown. Mr. Brown was returning a call Mr. Polens had placed to him. I think this message is self explanatory and tells us to do exactly what we had submitted with our application.

To further solidify in our minds that this was exactly the testing that Mr. Brown wanted, Mr. Polens placed a phone call to Mr. Brown on Thursday, August 26, 1976. Our Enclosure #3 is a copy of this file copy and it shows that it again verifies that we were told what to do to get registration of this product.

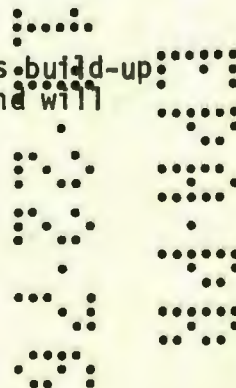
With our application that was originally sent on September 10, 1976 our cover letter reiterated the fact that this had all been discussed via correspondence and telephone calls with Mr. Brown before Ionics, Incorporated spent money on its tests. A copy of this letter is enclosed and is labeled Enclosure #4. For these many reasons we take exception to your No. 3 request in your letter of November 5.

(4) Ionics, Incorporated again takes exception to this request for additional information because of the above mentioned correspondence and telephone calls with Mr. E. F. Brown, head of Registration. We especially call your attention to our File Memo of August 26, 1976 (Enclosure #3) which mentions the 450 gallons of water that was discussed with Mr. Brown.

(5) "Additional data required to support claims" - Ionics, Incorporated again takes exception to this because of the enclosures referred to in No. 3 above which also apply to your request (5) "Additional data required to support claims".

Ionics, Incorporated takes the stand that it must be able to rely on information gained through conversations and written correspondence with EPA personnel. We can not be told one set of rules and then have it changed when we finally pay for the testing and submit our application. We, therefore, respectfully request that these be accepted as submitted in our application.

(6) Ionics, Incorporated will withdraw the statement "Can this build-up of bacteria in a water softener filter bed become a hazard?" and will eliminate it from any information sent out with the product.




Mr. James H. Banks, Product Manager 33
U. S. Environmental Protection Agency

November 17, 1976
Page 3

We again respectfully request prompt action on the above. We remind you that originally this application was hand carried by Mr. Polens to the EPA and presented to Mr. Brown on September 13, 1976. All of these delays were not the fault of Ionics, Incorporated. Ionics, Incorporated is suffering many hardships by this delay and has lost considerable monies and potential business from these delays. We look forward to your prompt action and reply.

Very truly yours,

IONICS, INCORPORATED
Bridgeville Plant



Walter J. Polens
Vice President

WJP:mle

Enclosures

cc E. F. Brown
J. D. Collins

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IONICS
IONICS, INCORPORATED

Enclosure #1

P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE A. C. 412 343-1040 TWX 5106973299

June 16, 1976

Mr. E. F. Brown
Chief, Disinfectants Branch
Registration Division (WH-567)
U. S. Environmental Protection Agency
401 M Street S. W.
Washington, D. C. 20460

SUBJECT: EPA Registration for General Ionics Bacteriostatic Water Conditioner

Dear Mr. Brown:

This letter is to thank you very much for the assistance you gave us during our telephone conversation of June 15, 1976. This was very much appreciated by me and all of our personnel.

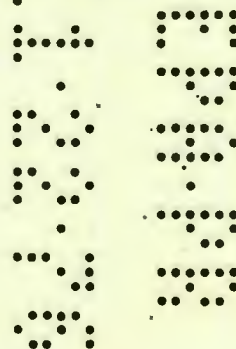
During this conversation we informed you that Ionics wants to use its EPA registered HYgene bacteriostatic water filtering media in the following manner:

We request an EPA registration on HYgene, using it in conjunction with a water softener. We are proposing to put a layer of HYgene on top of the resin beds in our water softeners to prevent the growth of bacteria within the media.

We have enclosed with this letter a line drawing of our proposed usage. We have also enclosed a specification sheet on our water softener as it is produced today without HYgene.

Our water softeners are what is known as a down flow system. By this in the water conditioning industry we mean that the water comes in through the top of the tank - is picked up by the slotted distributor tube (#5 on our line drawing). It is then sent up through this distributor tube or pipe and out into the house lines. We are proposing to put a layer of 0.2 cu.ft. of HYgene on top of our present cation resin bed which is 3/4 cu.ft. in our Model MIV-8. With the HYgene we would designate this as Model MIV-H-8 and reduce the resin to 0.6 cu.ft.

As we had discussed during our conversation, the silver will inhibit the growth of the bacteria. Since silver is a cation and the resin bed is a cation exchanger, it will be exchanged out in the softener and, therefore, the effluent water will contain no silver.



Mr. E. F. Brown
Chief, Disinfectants Branch
Registration Division (WH-567)
U. S. Environmental Protection Agency

June 16, 1976
Page 2

It is our feeling that this usage of HYgene will produce a big improvement in the type of water we will be giving to our customers.

We ask if it is necessary to do additional testing on the bacteriostatic properties of the HYgene in this application. Frankly, it would have the same effect on the water as we proved in our test results we sent you in order to receive our bacteriostatic Registration No. 35900-2. One of its big advantages would be that it would inhibit the growth of bacteria within the media when the unit sits overnight without usage.

We will appreciate any help you can give us in this matter and we are looking forward to receiving your prompt reply.

Very truly yours,

IONICS, INCORPORATED
Bridgeville Plant

Walter J. Polens
Vice President

WJP:mle

Enclosures: Line drawing of General Ionics Bacteriostatic Water Conditioner
MIV specification sheet

cc: J. D. Collins

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RAPIDFORMS

NO. 1100/3

REORDER FROM REGENT STANDARD FORMS, INC., AIRPORT INDUSTRIAL PARK, PENNSAUKEN, N.J. 08109

LETTER-LIMINATOR

SENDER: SNAP OUT YELLOW COPY ONLY. SEND WHITE AND PINK COPIES WITH CARBON INTACT.

TO

Walter Polens

FROM

John Collins

SUBJECT:

Bacteriostatic Water Conditioner

FOLD HERE
DATE

8/19/76

MESSAGE

Mr. E.F. Brown of EPA returned your call concerning registration of our Model MIVH-8 Water Conditioner.

Mr. Brown said he consulted with the Control Management Team Mr. Banks & Ms. Douglas on this. The only testing required for registration would be 3 to 4 silver analysis of effluent water from this unit showing ~~REPLY~~ no silver release.

Send copy of this data for bacteriostatic testing using method of support 2A from EPA File 35900-2

SIGNED

John Collins

Enclosure #3

MEMO

TO: File

DATE: August 26, 1976

FROM W. J. Polens

REF: EPA Registration of Bacteriostatic Water Conditioner

On Thursday August 26, 1976 at about 9:15 a.m. I was able to get my phone call through to Mr. Elijah Brown of the EPA. I had John Collins in my office and he and I discussed the requirements to register our EPA bacteriostatic water softener with Mr. Brown.

Mr. Brown informed us that all we would have to do was take one unit - put our HYgene in as we had submitted to him in our preliminary sketches and run 50 gallons of water through it - take a silver effluent test - run 200 gallons through it - take another silver effluent test - run another 200 gallons of water through it and run another silver effluent test.

Mr. Brown said it would not be necessary for us to run bacteriostatic tests on this unit. All we would have to do would be resubmit our testing as on our original application for registration of HYgene.

cc: J. D. Collins

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**IONICS****IONICS, INCORPORATED**

Encl. #1
P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE A. C. 412 343-1040 TWX 5106973299

September 10, 1976

Mr. E. F. Brown
Chief, Disinfectants Branch
Registration Division (WH-567)
Environmental Protection Agency
401 M Street S. W.
Washington, D. C. 20460

Subject: Registration of "General Ionics Model MIVSH-8 Bacteriostatic Water Conditioner"

Dear Mr. Brown:

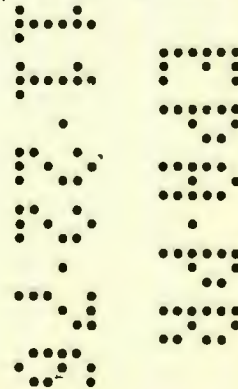
On Thursday, August 26, 1976 I had a telephone conversation with you in reference to the registration of our General Ionics Model MIVSH-8 Bacteriostatic Water Conditioner.

At that time you informed me that it would be acceptable by the EPA for Ionics to do the following testing to have this unit registered as a pesticide.

We were to take one water conditioner with our HYgene media on top of the bed and run 50 gallons of water through it - take a silver effluent test - run 200 gallons of water through it - take a silver effluent test - run another 200 gallons of water through it and take another silver effluent test.

In addition to the above we had Cyrus Wm. Rice have the unit sit overnight and then take one bed volume of water (4 gallons) and run a silver effluent test. All of these results are attached in the report from the Cyrus Wm. Rice Division of NUS Corporation.

During our phone conversation you informed me that it would not be necessary for Ionics to run bacteriostatic tests on this unit - that it would be sufficient for us to resubmit our testing as on our original application for registration of our HYgene media. Our HYgene registration number is EPA Reg. 35900-2. Copies of these tests are also enclosed.



Mr. E. F. Brown
Chief, Disinfectants Branch
Registration Division (WH-567)
Environmental Protection Agency

September 10, 1976
Page 2

We have also enclosed (5) copies of the Directions for Usage and (5) copies of our proposed label.

With this letter is our Application for Registration of Pesticide, EPA Form 8570-1 and Confidential Statement of Formula, EPA Form 8570-4.

As I had discussed with you, we respectfully request a prompt review of our application and the issuance of our registration.

Kindest personal regards.

Very truly yours,

IONICS, INCORPORATED
Bridgeville Plant

WJP:mle

Walter J. Polens
Vice President

Enclosures

cc: J. D. Collins

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SUBMISSION REVIEW RECORD			1. REGISTRATION NUMBER										PA 3	CYCLE	2. DATE RECEIVED		
			3	5	9	0	0	-	0	0	0	0	G	MO	DAY	YR	
3. 3CID PUBLICATION NECESSARY <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			4. PETITION NO.											5. RECEIVED PM TEAM MO DAY YR			
6. METHOD OF SUPPORT <input type="checkbox"/> 2A <input checked="" type="checkbox"/> 2B <input type="checkbox"/> 2C			7. PRODUCT MANAGER <i>Banks</i>											8. PROJECTED RETURN NO. MO DAY YR			
9. DATE PULLED <i>10-29-76</i>			10. DATE PUBLISHED			11. ACTION TYPE <i>New (Routine)</i>						12. OUTGOING DATE CODE MO DAY YR					
REV. SEQ.	REVIEW TYPE CODE	REVIEW TYPE	REVIEWER CODE (Initials)	SIGNATURE OF REVIEWER								COM-MENT CODE	DATE REVIEW COMPLETED MO DAY YR				
	A	REVIEWABILITY TEAM	<i>Jas</i>	<i>J. Ashaughnaw</i>								<i>05</i>	<i>11/01/76</i>				
	B	PRODUCT MANAGER TEAM EFFICACY REVIEW															
	C	PRODUCT MANAGER TEAM HUMAN SAFETY REVIEW															
	D	PRODUCT MANAGER TEAM ENVIRONMENTAL SAFETY REVIEW															
	E	PRODUCT MANAGER TEAM SUBMISSION REVIEW	<i>RRD</i>	<i>R. Douglas</i>								<i>JB</i>	<i>10/29/76</i>				
	F	PRODUCT MANAGER															
	G	INTERAGENCY REFERRAL															
	H	COST-BENEFIT REVIEW															
	I	PUBLIC COMMENTS REVIEW															
	J	EEE BRANCH INSECTICIDE EFFICACY															
	K	EEE BRANCH HERBICIDE EFFICACY															
	L	EEE BRANCH FUNGICIDE EFFICACY															
	M	EEE BRANCH RODENTICIDE EFFICACY															
	N	EEE BRANCH DISINFECTANT EFFICACY	<i>DMP</i>	<i>D. M. Porter</i>									<i>11/02/76</i>				
	O	CHEMISTRY BRANCH RESIDUE CHEMISTRY															
	P	EEE BRANCH ENVIRONMENTAL CHEMISTRY															
	Q	TOXICOLOGY BRANCH HUMAN SAFETY															
	R	EEE BRANCH ENVIRONMENTAL SAFETY															
	S																
	T																
PRODUCT MANAGER SIGNATURE				TYPE OF RESPONSE										CODE			
<i>James H. Banks</i>				<i>Objection (New)</i>										<i>A5</i>			

NOV 10 1976

NOV 05 1976

IONICS, INCORPORATED
Attn: Walter J. Polens
P.O. Box 99
Bridgeville, PA 15017

Gentlemen:

subject : GENERAL IONICS MODEL MIVSH-8
BACTERIOSTATIC WATER CONDITIONER
File Symbol 35900-G
Application of October 7, 1976

The application referred to above has been determined pursuant to 40 C.F.R. 162.6(a)(5) (40 FR 28242, 28273, July 3, 1975) not to be sufficiently complete to process the application and therefore the application is considered deficient. Labeling and/or other information as specified below must be submitted before the processing of the application can be completed. If such labeling and/or other information or a written request for additional information is not submitted to the Registration Division within seventy-five (75) days of the date of this notice, the application will either be administratively withdrawn or denied pursuant to the provisions of 40 C.F.R. 162.7(e).

(1) The ingredient statement, declaring 1.05% silver, is not correct. The pesticide here consists of:

Hygene (1.05% silver)	52 cubic inches
[REDACTED]	
+Gravel	unknown cubic inches

Therefore, the % of silver is calculated as

$$\% \text{ silver} = \frac{(\text{wt. of Hygene})(0.0105)}{\text{wt. of Hygene} + \text{wt. of } [REDACTED] + \text{wt. of gravel}} \times 100$$

(2) Tell us the wt. (in pounds or ounces) of Hygene, [REDACTED] and gravel are in this product.

(3) Claims not supported by data: The data developed to demonstrate that the silver-impregnated filtering media per se possess intrinsic value for use in water treatment products can not be extrapolated to substantiate efficacy of this finished fabricated water treatment product.

(4) Insufficient data information: Before the relevancy of the silver-release data developed for this product can be determined for the recommended use pattern, information must be provided regarding the correlation of the 450-gallon water challenge to an actual in-use situation for this product and the chemical analysis of the tap water tested.

(5) Additional data required to support claims:

A comparative in-use and/or simulated in-use study of this water softener product with and without the silver-impregnated filtering media is required to establish the need for and the effectiveness of the silver-impregnated filtering media in this product which has an automatic cycle with a backwashing procedure to remove sediment from the ion exchange softening filter medium. Testing must be sufficient to demonstrate that a "build-up" of bacteria occurs when the water softener product is used as directed. Municipal treated tap water with a high level of innocuous bacteria should be used and/or augmented with additional innocuous bacteria indigenous to municipally treated tap water so that the "build-up" phenomenon can be readily detected. Since the life of the water softener will greatly exceed the recommended or expected life of the silver-impregnated media, this study should be only long enough to demonstrate the effectiveness and duration of activity of the silver-impregnated filtering media as a bacteriostat against the innocuous bacteria in the defined hard tap water. The silver content in the effluent must also be determined at intermittent holding periods during this study. This study should encompass all appropriate procedures indicated in the enclosure "Interim Requirements for Registration of Bacteriostatic Water Treatment Units for Home Use." It is recognized that the water quality requirement set forth in the enclosure is not applicable to the study with this product which is designed to be used solely for defined hard waters. The complete test protocol must accompany the test results submitted.

(6) The claims under " " to the question "Can the build-up of bacteria in a water softener filter bed become a hazard?" are unwarranted and must be deleted. Valid clinical studies would be required to substantiate such claims.

(7) The additional data and information requested must be submitted before the labeling review can be completed.

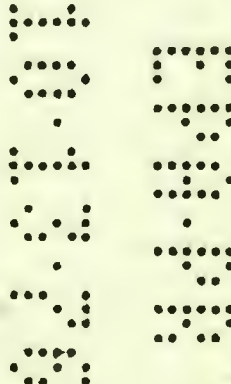
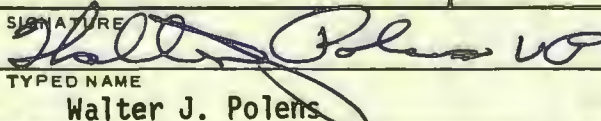
This product may not be lawfully distributed in interstate commerce until it is registered.

Sincerely,

JHB
James H. Banks
Product Manager 33
Disinfectants Branch
Registration Division (WH-567)

Enclosure

WH-567 IS : RDD:md:590411:Rm 321 11-4-76

U.S. ENVIRONMENTAL PROTECTION AGENCY OFFICE OF PESTICIDES PROGRAM (WH-567) WASHINGTON, D.C. 20460		1. REFERENCE CODE	2. EPA USE ONLY				
APPLICATION FOR PESTICIDE: <input type="checkbox"/> REGISTRATION <input type="checkbox"/> REREGISTRATION (Please read instructions on reverse before completing) A		3. COMPANY/PRODUCT NO. 35900 - G	4. PROPOSED CLASSIFICATION <input checked="" type="checkbox"/> GENERAL <input type="checkbox"/> RESTRICTED				
5. NAME AND ADDRESS OF APPLICANT (Include ZIP Code) IONICS, INCORPORATED P.O. Box 99 Bridgeville, Pennsylvania 15017		6. TYPE OF CONTAINER <input checked="" type="checkbox"/> METAL <input type="checkbox"/> PLASTIC <input type="checkbox"/> GLASS <input type="checkbox"/> PAPER <input type="checkbox"/> OTHER (Specify)					
<input type="checkbox"/> CHECK IF THIS IS A NEW ADDRESS		7. WILL CHILD RESISTANT PACKAGING BE USED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO					
8. PRODUCT NAME General Ionics Model MIVSH-8 Bacteriostatic Water Conditioner		9. EXPERIMENTAL PERMIT NO.					
10. LOCATION OF LABEL DIRECTIONS <input type="checkbox"/> ON LABEL <input checked="" type="checkbox"/> ON MATERIAL ACCOMPANYING PRODUCT	11. MANNER IN WHICH LABEL IS AFFIXED TO PRODUCT <input type="checkbox"/> LITHOGRAPH <input type="checkbox"/> OTHER (Specify) <input checked="" type="checkbox"/> PAPER GLUED <input type="checkbox"/> STENCILED						
12. TYPES OF DATA SUBMITTED		FOR EPA USE ONLY					
01. NONE		1201					
<input checked="" type="checkbox"/> 02. PRODUCT CHEMISTRY		1202					
03. RESIDUE CHEMISTRY		1203					
04. ENVIRONMENTAL CHEMISTRY		1204					
05. EFFICACY		1205					
06. PHYTOTOXICITY		1206					
07. HUMAN SAFETY		1207					
08. DOMESTIC ANIMAL SAFETY		1208					
09. FISH AND WILDLIFE SAFETY		1209					
10. BENEFICIAL INSECT SAFETY		1210					
11. ACCIDENT EXPOSURE EXPERIENCE		1211					
12. OTHER (Specify)		1212					
13. OTHER (Specify)		1213					
13. METHOD OF SUPPORT (See instructions) <input type="checkbox"/> Required Supporting Data Attached. (2A) <input checked="" type="checkbox"/> Required Supporting Data is Submitted by Reference. (2B)		14. CONTACT POINT Complete items directly below for identification of individual to be contacted, if necessary, to process this application.		15. DATE APPLICATION RECEIVED (Stamped)			
EPA Registration No. 35900-2		NAME Walter J. Polens					
OFFER TO PAY STATEMENT I hereby offer to pay reasonable compensation to the extent provided under Section 3(c)(1)(D) of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, and in accordance with the Regulations and Guidelines published thereunder for use of any test data which has been submitted to the U.S. Environmental Protection Agency in support of an application for the registration of a pesticide for the first time on or after January 1, 1970 and which may be used in support of the registration application for the subject pesticide.		TITLE Vice President					
		TELEPHONE NO. (Include Area Code) (412) 343-1040					
16. SIGNATURE 		17. TITLE Vice President					
18. TYPED NAME Walter J. Polens		19. DATE SIGNED 10/7/76					

U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDE PROGRAMS (WH-567)
WASHINGTON, D.C. 20460

1. COMPANY/REGISTRATION NO.

35900-B

LABEL TECHNICAL DATA

(See INSTRUCTIONS on back of last part)

3. PRODUCT NAME

GENERAL IONIX Model
F HUSHB Bacteriostatic WATER Conditioner

4. APPLICATION SITES (Check all that apply)		5. PEST TYPE (Check all that apply)		7. USER TYPE (Check all that apply)	
<input type="checkbox"/> 01 CROPS (Fruit)		<input type="checkbox"/> 01 ALGAE		<input type="checkbox"/> 01 UNSPECIFIED GENERAL USE	
<input type="checkbox"/> 02 CROPS (Vegetable)		<input type="checkbox"/> 02 AMPHIBIAN/REPTILE		<input type="checkbox"/> 02 UNSPECIFIED RESTRICTED USE	
<input type="checkbox"/> 03 CROPS (Field)		<input checked="" type="checkbox"/> 03 BACTERIA		<input checked="" type="checkbox"/> 03 HOMEOWNER USE	
<input type="checkbox"/> 04 CROPS (Spice)		<input type="checkbox"/> 04 BIRDS		<input type="checkbox"/> 04 JANITORIAL USE	
<input type="checkbox"/> 05 CROPS (Nut)		<input type="checkbox"/> 05 FISH		<input type="checkbox"/> 05 PEST CONTROL OPERATOR USE	
<input type="checkbox"/> 06 CROPS (Other)		<input type="checkbox"/> 06 FOULING ORGANISMS		<input type="checkbox"/> 06 COMMERCIAL APPLICATOR USE	
<input type="checkbox"/> 10 SOIL TREATMENT (No crop specified)		<input type="checkbox"/> 07 FUNGI		<input type="checkbox"/> 07 FARMER USE	
<input type="checkbox"/> 20 FOREST		<input type="checkbox"/> 08 INSECTS AND MITES		<input type="checkbox"/> 08 MEDICAL USE	
<input type="checkbox"/> 30 ORNAMENTALS		<input type="checkbox"/> 09 MAMMALS		<input type="checkbox"/> 09 VETERINARY USE	
<input type="checkbox"/> 40 TURF		<input type="checkbox"/> 10 NEMATODES		<input type="checkbox"/> 10 GOVERNMENT AGENCY USE	
<input type="checkbox"/> 50 STORED PRODUCTS TREATMENT		<input type="checkbox"/> 11 PLANTS		<input type="checkbox"/> 11 MANUFACTURING USE	
<input type="checkbox"/> 61 ANIMALS (Livestock)		<input type="checkbox"/> 12 RODENTS		8. FORMULATION (Check one only)	
<input type="checkbox"/> 62 ANIMALS (Dairy)		<input type="checkbox"/> 13 SLIME		<input type="checkbox"/> 01 TECHNICAL CHEMICAL	
<input type="checkbox"/> 63 ANIMALS (Pet)		<input type="checkbox"/> 14 SLUGS AND SNAILS		<input type="checkbox"/> 02 FORMULATION INTERMEDIATE	
<input type="checkbox"/> 64 ANIMALS (Laboratory)		<input type="checkbox"/> 15 VIRUS		<input checked="" type="checkbox"/> 03 DUST	
<input type="checkbox"/> 65 ANIMALS (Other)		<input type="checkbox"/> 16 OTHER (Specify)		<input type="checkbox"/> 04 GRANULAR	
<input type="checkbox"/> 71 OUTDOOR (Nocrop Agricultural)				<input type="checkbox"/> 05 PELLETTED/TABLETTED	
<input type="checkbox"/> 72 OUTDOOR (Resident/Commercial)				<input type="checkbox"/> 06 WETTABLE POWDER	
<input type="checkbox"/> 73 OUTDOOR (Non agricultural)				<input type="checkbox"/> 07 WETTABLE POWDER/DUST	
<input type="checkbox"/> 81 BUILDINGS (Agricultural)		9. MODE OF ACTION (Check all that apply)		<input type="checkbox"/> 08 CRYSTALLINE	
<input type="checkbox"/> 82 BUILDINGS (Commercial)		<input type="checkbox"/> 01 ATTRACTANT		<input type="checkbox"/> 09 MICROENCAPSULATED	
<input type="checkbox"/> 83 BUILDINGS (Food Processing)		<input checked="" type="checkbox"/> 02 BIOLOGICAL CONTROL		<input type="checkbox"/> 10 IMPREGNATED MATERIALS	
<input type="checkbox"/> 84 BUILDINGS (Medical)		<input type="checkbox"/> 03 CHEMOSTERILANT		<input type="checkbox"/> 11 SELF-GENERATING SMOKE	
<input checked="" type="checkbox"/> 85 BUILDINGS (Residential)		<input type="checkbox"/> 04 DEFOLIANT		<input type="checkbox"/> 12 EMULSIFIABLE CONCENTRATE	
<input type="checkbox"/> 91 EQUIPMENT (Commercial)		<input type="checkbox"/> 05 DESICCANT		<input type="checkbox"/> 13 INVERT EMULSION	
<input type="checkbox"/> 92 EQUIPMENT (Food)		<input type="checkbox"/> 06 FEEDING DEPRESSANT		<input type="checkbox"/> 14 FLOWABLE CONCENTRATE	
<input type="checkbox"/> 93 EQUIPMENT (Agricultural)		<input type="checkbox"/> 07 GROWTH INHIBITOR		<input type="checkbox"/> 15 SOLUBLE CONCENTRATE	
<input type="checkbox"/> 94 EQUIPMENT (Medical)		<input type="checkbox"/> 08 GROWTH REGULATOR		<input type="checkbox"/> 16 SOLUTION (Ready to Use)	
<input type="checkbox"/> 95 EQUIPMENT (Transportation)		<input type="checkbox"/> 09 POISON (Single dose)		<input type="checkbox"/> 17 OILS (No added pesticide)	
<input type="checkbox"/> 96 LAUNDRY AND DRY CLEANING		<input type="checkbox"/> 10 POISON (Multiple Dose)		<input type="checkbox"/> 18 PRESSURIZED (Gas)	
<input type="checkbox"/> 97 INDUSTRIAL PRESERVATIVES		<input type="checkbox"/> 11 PRESERVATIVE		<input type="checkbox"/> 19 PRESSURIZED (Liquid)	
<input type="checkbox"/> 98 PESTICIDE (Manufacturing only)		<input type="checkbox"/> 12 REPELLENT		<input type="checkbox"/> 20 PRESSURIZED (Dust)	
<input type="checkbox"/> 99 OTHER (Specify)		<input type="checkbox"/> 13 OTHER (Specify)		<input type="checkbox"/> 21 OTHER (Specify)	

REMARKS

EEE BRANCH REVIEW

DATE: IN _____ OUT _____ IN _____ OUT _____ IN 10/18/76 OUT 10/21/76
FISH & WILDLIFE ENVIRONMENTAL CHEMISTRY EFFICACY

FILE OR REG. NO. 35900-G

PETITION OR EXP. PERMIT NO. _____

DATE DIV. RECEIVED 10-13-76

DATE OF SUBMISSION 10-07-76

DATE SUBMISSION ACCEPTED _____

TYPE PRODUCT(S): I (D) H, F, N, R, S Bacteriostatic Water Treatment Unit

PRODUCT MGR. NO. 33

PRODUCT NAME(S) GENERAL IONICS MODEL MIVSH-8

COMPANY NAME Ionics, Inc.

SUBMISSION PURPOSE New application with data

CHEMICAL & FORMULATION Silver 7%

200.0 Introduction

200.1 Use: Water softener with bacteriostatic filtering media.

200.2.1 Factors affecting amount/type of data required:

intrinsic Data developed against Escherichia coli have been accepted as ~~intrinsic~~ evidence of efficacy for this silver-impregnated filtering media per se to inhibit growth of bacteria. However, this evidence can not be extrapolated to support efficacy of any finished fabricated water treatment product containing this bacteriostatic filtering media under the specific use pattern recommended. Data must be provided to substantiate efficacy claims for this finished fabricated water treatment product by simulated or actual in-use tests.

201.0 Data Summary

201.1 Abstracts of tests: Bacteriostatic and silver-release data developed to demonstrate efficacy of the silver-impregnated filtering media per se were resubmitted to support efficacy of this finished fabricated water treatment product. In addition, one product unit was challenged with 450 gallons of tap water and the effluent was analyzed for silver content by atomic absorption method.

201.1.2 Data summary: The data submitted for this product ~~are~~ indicated below.

Gallons thru Conditioner (Model MIVSH-8)	ppb Silver
50	<10
250	<10
450	<10
Stood overnight and then one bed volume of water thru (~4 gals)	30

Flow rate 4.5 gallons per minute

202.0 Recommendations

intrinsic

202.2 Claims not supported by data: The data developed to demonstrate that the silver-impregnated filtering media per se possess ~~intrinsic~~ value for use in water treatment products can not be extrapolated to substantiate efficacy of this finished fabricated water treatment product.

202.2.1 Insufficient data information: Before the relevancy of the silver-release data developed for this product can be determined for the recommended use pattern, information must be provided regarding the correlation of the 450-gallon water challenge to an actual in-use situation for this product and the chemical analysis of the tap water tested.

202.3 Additional data required to support claims:

A comparative in-use and/or simulated in-use study of this water softener product with and without the silver-impregnated filtering media is required to establish the need for and the effectiveness of the silver-impregnated filtering media in this product which has an automatic cycle with a backwashing procedure to remove sediment from the ion exchange softening filter medium. Testing must be sufficient to demonstrate that a "build-up" of bacteria occurs when the water softener product is used as directed. Municipal treated tap water with a high level of innocuous bacteria should be used and/or augmented with additional innocuous bacteria indigenous to municipally treated tap water so that the "build-up" phenomenon can be readily detected. Since the life of the water softener will greatly exceed the recommended or expected life of the silver-impregnated media, this study should be only long enough to demonstrate the effectiveness and duration of activity of the silver-impregnated filtering media as a bacteriostat against the innocuous bacteria in the defined hard tap water. The silver content in the effluent must also be determined at intermittent holding periods during this study. This study should encompass all appropriate procedures indicated in the enclosure "Interim Requirements for Registration of Bacteriostatic Water Treatment Units for Home Use." It is recognized that the water quality requirement set forth in the enclosure is not applicable to the study with this product which is designed to be used solely for defined hard waters. The complete test protocol must accompany the test results submitted.

RUS WM. RICE DIVISION

September 3, 1976

Mr. John Collins,
IONICS, INC.
P. O. Box 99
Bridgeville, PA 15017

Dear Mr. Collins:

Enclosed are the results of the analysis performed on the effluent from General Ionics Bacteriostatic Water Conditioner (Model MIVSH-8). Tap water with a flow rate of 4.5 gallons per minute was passed thru the filter and the effluent checked for silver. Duplicate samples at each interval were analyzed by atomic absorption to determine the silver concentration.

Verification was made that the ion exchange softening resin was placed in the bottom portion of the tank with the hygiene bacteriostatic filter media above the resin.

Sincerely,

Rose Ann Cochran

(Mrs.) Rose Ann Cochran, Manager
Water Laboratories Development

RAC:cm

Enclosure

92.27.07

88.843

92.27.08

88.843



IONICS
IONICS, INCORPORATED

P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE A. C. 412 343-1040 TWX 5106973299

October 7, 1976

Registration Division (WH-567)
U. S. Environmental Protection Agency
401 M Street S. W.
Washington, D. C. 20460

OFFER TO PAY STATEMENT

I hereby offer to pay reasonable compensation to the extent provided under Section 3(c)(1)(D) of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, and in accordance with the Regulations and Guidelines published thereunder for use of any test data which has been submitted to the U.S. Environmental Protection Agency in support of an application for the registration of a pesticide for the first time on or after January 1, 1970 and which may be used in support of the registration application for the subject pesticide.

92-07-07

88-883

Walter J. Polens, Vice President
IONICS, INCORPORATED



IONICS
IONICS, INCORPORATED

P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE A. C. 412 343-1040 TWX 5106973299

September 10, 1976

Mr. E. F. Brown
Chief, Disinfectants Branch
Registration Division (WH-567)
Environmental Protection Agency
401 M Street S. W.
Washington, D. C. 20460

Subject: Registration of "General Ionics Model MIVSH-8 Bacteriostatic Water Conditioner"

Dear Mr. Brown:

On Thursday, August 26, 1976 I had a telephone conversation with you in reference to the registration of our General Ionics Model MIVSH-8 Bacteriostatic Water Conditioner.

At that time you informed me that it would be acceptable by the EPA for Ionics to do the following testing to have this unit registered as a pesticide.

We were to take one water conditioner with our HYgene media on top of the bed and run 50 gallons of water through it - take a silver effluent test - run 200 gallons of water through it - take a silver effluent test - run another 200 gallons of water through it and take another silver effluent test.

In addition to the above we had Cyrus Wm. Rice have the unit sit overnight and then take one bed volume of water (4 gallons) and run a silver effluent test. All of these results are attached in the report from the Cyrus Wm. Rice Division of NUS Corporation.

During our phone conversation you informed me that it would not be necessary for Ionics to run bacteriostatic tests on this unit - that it would be sufficient for us to resubmit our testing as on our original application for registration of our HYgene media. Our HYgene registration number is EPA Reg. 35900-2. Copies of these tests are also enclosed.

91-83-02
88-843
396

September 10, 1976
Page 2

We have also enclosed (5) copies of the Directions for Usage and (5) copies of our proposed label.

With this letter is our Application for Registration of Pesticide, EPA Form 8570-1 and Confidential Statement of Formula, EPA Form 8570-4.

As I had discussed with you, we respectfully request a prompt review of our application and the issuance of our registration.

Kindest personal regards.

Very truly yours,

IONICS, INCORPORATED
Bridgeville Plant

Walter J. Polens
Vice President

WJP:m1e

Enclosures

cc: J. D. Collins

2013年11月13日



IONICS
IONICS, INCORPORATED

P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE A. C. 412 343-1040 TWX 5106973299

October 7, 1976

Mr. E. F. Brown
Chief, Disinfectants Branch
Registration Division (WH-567)
U.S. Environmental Protection Agency
401 M Street S. W.
Washington, D. C. 20460

Subject: Registration of "General Ionics Model MIVSH-8 Bacteriostatic Water Conditioner"

Dear Mr. Brown:

Enclosed are all of the data and application forms that were originally given to you during my personal visit on September 13, 1976. This is for the registration of our General Ionics Model MIVSH-8 Bacteriostatic Water Conditioner. We have made the corrections that you requested when the application was returned to us.

It is our feeling that this delay was caused by EPA and we, therefore, request Extra Prompt Action on the evaluation of this application.

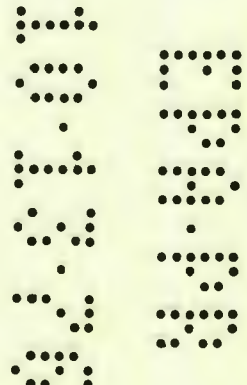
Very truly yours,

IONICS, INCORPORATED
Bridgeville Plant

Walter J. Polens
Vice President

WJP:mle

Enclosures



**IONICS****IONICS, INCORPORATED**


P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE A. C. 412 343-1040 TWX 5106973299

October 7, 1976

Registration Division (WH-567)
U. S. Environmental Protection Agency
401 M Street S. W.
Washington, D. C. 20460

OFFER TO PAY STATEMENT

I hereby offer to pay reasonable compensation to the extent provided under Section 3(c)(1)(D) of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, and in accordance with the Regulations and Guidelines published thereunder for use of any test data which has been submitted to the U.S. Environmental Protection Agency in support of an application for the registration of a pesticide for the first time on or after January 1, 1970 and which may be used in support of the registration application for the subject pesticide.



Walter J. Polens, Vice President
IONICS, INCORPORATED

92-07-07

84-843

GENERAL IONICS
MODEL MIVSH-8
BACTERIOSTATIC WATER CONDITIONER
WITH HYGENE

Inhibits the growth of bacteria

CAUTION: KEEP OUT OF REACH OF CHILDREN

EPA Reg. No.

EPA Est. No. 35900 PA 01

INGREDIENTS:

1. HYGENE BACTERIOSTATIC WATER FILTER MEDIA - 52 CU. IN.

ACTIVE INGREDIENT METALLIC SILVER ---- 1.05%

INERT INGREDIENT ACTIVATED CARBON --- 98.95%

2. CATION EXCHANGE WATER SOFTENER RESIN - 0.75 CU. FT.

DIRECTIONS FOR USE: SEE HOMEOWNER'S MANUAL

DISPOSAL OF SPENT MEDIA: Remove Hygene media from top of filter bed and place in suitable container for disposing with trash.

Another fine product by the manufacturers of General Ionics Water Conditioning Equipment
IONICS, INCORPORATED Routes 519 & 50 Bridgeville, Penna. 15017

92.07.07

84.843

92.07.8

84.843

J.P. Sonio
9-2-76

Bruce

October 12, 1970

Mr. Walter F. Poles
Vice President
Ingram, Incorporated
P.O. Box 25
Harrisville, Pennsylvania 17017

SUBJECT: General Inquiries About Division
of the Bureau of Motor Vehicle Division

Dear Mr. Poles:

Thank you for the information forwarded with your letter of September 24, 1970, which I received on September 25, 1970. This will certainly help me to get a better hold on the situation.

I have reviewed these materials and it is obvious to me that there are deficiencies. A review of each of the documents that was submitted at the time of your visit would have resulted in your being informed of the necessity to complete the New Application form, in that there was no "offer to pay reasonable compensation" for the use of test data as is required under the Statute and Policy Statements issued thereunder. In any case, we apologize for having inconvenienced you in this regard.

You will note that the New Application form incorporates the method of Support (Item 13) and Offer to Pay Statements. Therefore, there is no longer the necessity to execute a separate document covering the method of support and offer to pay statements as was in effect when you filed application for registration of Hyman Acoustic Media.

Mr. Brown has informed you that approximately three weeks would be required for the review of your application. While we have not yet been able to provide you with results of a review within three weeks from the date of your original visit to the Division in connection with this application, I assure you that when we receive your refilled application, we will afford it expedited consideration. The results of the review will be communicated to you as soon as we are possible to do so.

Again, I apologize for any inconvenience that we have caused you in this matter and urge you to continue to assist in completing the review of your application in an expeditious manner.

Sincerely,
B. Douglas D. Camp

Douglas D. Camp
Associate Director
for Registration



IONICS
IONICS, INCORPORATED

P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE A. C. 412 343-1040 TWX 5106973299

September 24, 1976

Mr. Douglas Campt
Associate Director for Registration
Disinfectants Branch
United States Environmental Protection Agency
401 M Street S. W.
Washington, D. C. 20460

Subject: Registration of "General Ionics Model MIVSH-8 Bacteriostatic Water Conditioner"

Dear Mr. Campt:

As per your phone conversation with our Mr. John Collins on September 23, 1976 please find enclosed one each Xerox copy of data I personally handcarried and submitted to the EPA Registration Division office on September 13, 1976 for registration of our General Ionics Model MIVSH-8 Bacteriostatic Water Conditioner. As mentioned in the Xeroxed letter of September 10, 1976 (copy enclosed), the required number of copies of instructions, etc. were included. I have only sent you one of each of the enclosures.

I also call to your attention the fact that the testing procedures and all requirements were discussed at length with Mr. Elijah Brown before any of this data was prepared.

While at the EPA Registration office, this application and all the enclosures including the application forms were reviewed by Mr. Brown and myself. If these forms were outdated, I should have been so informed at that time. I was not so informed - In fact, I was told that everything was fine and that I would have a report within 3 weeks. There was one deficiency and that was that we did not have one form with the application. This was a new form that Mr. Brown obtained for me and he and I filled it out in his office. I, of course, do not have a Xerox copy of that form enclosed with this letter.

On September 20, 1976 I placed a call to the EPA office to check on the progress and I was told that the application was entered and was being checked by Chemistry Division.

On September 23, 1976 I received a call from Miss Douglas and she informed me that our complete application was being returned because the form on which it was prepared had been replaced by a new form. She stated that they would not even register it in or give it a file number as long as it was submitted on this incorrect form. She said it was being returned to me. I find it unbelievable that it took them almost 2 weeks to do the first step in registering this application and not recognizing immediately that these were the wrong forms.

92.03.8

04.04.3



IONICS
IONICS, INCORPORATED

P. O. BOX 99, BRIDGEVILLE, PENNSYLVANIA 15017
PHONE A. C. 412 343-1040 TWX 5106973299

September 10, 1976

Mr. E. F. Brown
Chief, Disinfectants Branch
Registration Division (WH-567)
Environmental Protection Agency
401 M Street S. W.
Washington, D. C. 20460

Subject: Registration of "General Ionics Model MIVSH-8 Bacteriostatic Water Conditioner"

Dear Mr. Brown:

On Thursday, August 26, 1976 I had a telephone conversation with you in reference to the registration of our General Ionics Model MIVSH-8 Bacteriostatic Water Conditioner.

At that time you informed me that it would be acceptable by the EPA for Ionics to do the following testing to have this unit registered as a pesticide.

We were to take one water conditioner with our HYgene media on top of the bed and run 50 gallons of water through it - take a silver effluent test - run 200 gallons of water through it - take a silver effluent test - run another 200 gallons of water through it and take another silver effluent test.

In addition to the above we had Cyrus Wm. Rice have the unit sit overnight and then take one bed volume of water (4 gallons) and run a silver effluent test. All of these results are attached in the report from the Cyrus Wm. Rice Division of NUS Corporation.

During our phone conversation you informed me that it would not be necessary for Ionics to run bacteriostatic tests on this unit - that it would be sufficient for us to resubmit our testing as on our original application for registration of our HYgene media. Our HYgene registration number is EPA Reg. 35900-2. Copies of these tests are also enclosed.

92.03.6

94.04.3

Mr. E. F. Brown
Chief, Disinfectants Branch
Registration Division (WH-567)
Environmental Protection Agency

September 10, 1976
Page 2

We have also enclosed (5) copies of the Directions for Usage and (5) copies of our proposed label.

With this letter is our Application for Registration of Pesticide, EPA Form 8570-1 and Confidential Statement of Formula, EPA Form 8570-4.

As I had discussed with you, we respectfully request a prompt review of our application and the issuance of our registration.

Kindest personal regards.

Very truly yours,

IONICS, INCORPORATED
Bridgeville Plant

Walter J. Polens
Vice President

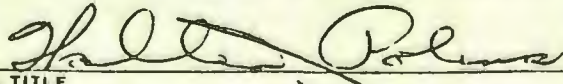
WJP:mle

Enclosures

cc: J. D. Collins

92-02-6

88-883

U.S. ENVIRONMENTAL PROTECTION AGENCY OFFICE OF PESTICIDES PROGRAMS REGISTRATION DIVISION WASHINGTON, D.C. 20460		1. DATE OF APPLICATION September 10, 1976	
APPLICATION FOR <u>NEW</u> REGISTRATION OF A PESTICIDE (Under the Federal Insecticide, Fungicide, and Rodenticide Act)		2. NAME OF PESTICIDE (Must be same product name as on label-do not list active ingredients) General Ionics Model MIVSH-8 Bacteriostatic Water Conditioner	
IMPORTANT: READ INSTRUCTIONS ON REVERSE		OTHER (Specify)	
3. TYPE OF PESTICIDE (Check each applicable item for combination products) INSECTICIDE <input type="checkbox"/> FUNGICIDE <input type="checkbox"/> HERBICIDE <input type="checkbox"/> RODENTICIDE <input type="checkbox"/> GERMICIDE-DISINFECTANT <input checked="" type="checkbox"/>		5. IS THE REGISTRANT SHOWN IN ITEM 4 THE MANUFACTURER? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> (If "No", see instruction 5 on reverse)	
4. NAME & MAILING ADDRESS OF FIRM TO WHOM REGISTRATION IS TO BE ISSUED (Include Zip Code) Ionics, Incorporated P. O. Box 99 Bridgeville, PA 15017			
6. TYPE OF FORMULATION DUST <input type="checkbox"/> WETTABLE POWDER <input type="checkbox"/> PRESSURIZED PRODUCT <input type="checkbox"/> GRANULAR <input checked="" type="checkbox"/> EMULSIFIABLE LIQUID <input type="checkbox"/> BAIT <input type="checkbox"/>		OTHER (Specify)	
7. TYPE OF CONTAINER METAL <input checked="" type="checkbox"/> GLASS <input type="checkbox"/> PLASTIC <input type="checkbox"/> PAPER <input type="checkbox"/>		8. NET CONTENTS OR CONTAINER SIZES 8" Dia. x 45" Height	
9. MANNER IN WHICH LABEL IS AFFIXED TO PRODUCT LITHOGRAPHED <input type="checkbox"/> PAPER, GLUED <input checked="" type="checkbox"/> STENCILED <input type="checkbox"/>		OTHER (Specify)	
10. PLACE WHERE DIRECTIONS FOR USE APPEAR ON LABEL <input type="checkbox"/> IN PRINTED MATTER ACCOMPANYING PRODUCT <input checked="" type="checkbox"/>			
11. DATA SUBMITTED WITH THIS APPLICATION (Identify and submit in triplicate) EFFICACY DATA <input checked="" type="checkbox"/> TOXICOLOGY DATA <input type="checkbox"/> RESIDUE DATA <input type="checkbox"/> PETITION FOR TOLERANCE <input type="checkbox"/> OTHER (Specify):			
Test Report of 9/3/76 from NUS Corp., C. W. Rice Division			
12. ANY ADDITIONAL PERTINENT INFORMATION (Do not enter confidential formula here-see item 13, below) <u>Method of Support</u> Registration of Ionics HYgene Bacteriostatic Water Filter Media EPA Registration No. #35900-2			
13. THE FOLLOWING MUST BE SUBMITTED WITH APPLICATION <ul style="list-style-type: none">Five (5) copies of proposed labeling, including all printed or graphic matter which may accompany the sale of this product. Copies must be clearly legible and identical.Five (5) copies of the complete formula, showing the precise name and percentage of each active and each inert ingredient. (This information is treated confidentially.)		17. RECEIVED BY EPA-ABP/REGISTRATION DIVISION, WASHINGTON, D.C. 20250 IN ANY CORRESPONDENCE ON THIS PRODUCT, REFER TO THIS FILE SYMBOL NO.:	
14. SIGNATURE OF AUTHORIZED FIRM REPRESENTATIVE 		16. DATE SIGNED 9/10/76	
15. TITLE Vice President Ionics, Inc.			



CYRUS WM. RICE DIVISION

ANALYTICAL SERVICES LABORATORY

15 NOBLE AVENUE • PITTSBURGH, PA. 15205
412-343-9200

September 3, 1976

Mr. John Collins
IONICS, INC.
P. O. Box 99
Bridgeville, PA 15017

Dear Mr. Collins:

Enclosed are the results of the analysis performed on the effluent from General Ionics Bacteriostatic Water Conditioner (Model MIVSH-8). Tap water with a flow rate of 4.5 gallons per minute was passed thru the filter and the effluent checked for silver. Duplicate samples at each interval were analyzed by atomic absorption to determine the silver concentration.

Verification was made that the ion exchange softening resin was placed in the bottom portion of the tank with the hygiene bacteriostatic filter media above the resin.

Sincerely,

Rose Ann Cochran

(Mrs.) Rose Ann Cochran, Manager
Water Laboratories Development

RAC:cm

Enclosure

92.07.6

84.843

GENERAL IONICS
MODEL MIVSH-8
BACTERIOSTATIC WATER CONDITIONER
WITH HYGENE

Inhibits the growth of bacteria

CAUTION: KEEP OUT OF REACH OF CHILDREN

EPA Reg. No.

EPA Est. No. 35900 PA 01

INGREDIENTS:

1. HYGENE BACTERIOSTATIC WATER FILTER MEDIA - 52 CU. IN.
ACTIVE INGREDIENT METALLIC SILVER ____ 1.05 %
INERT INGREDIENT ACTIVATED CARBON ____ 98.95 %
2. CATION EXCHANGE WATER SOFTENER RESIN - 0.75 CU. FT.

DIRECTIONS FOR USE: SEE HOMEOWNER'S MANUAL

DISPOSAL OF SPENT MEDIA: Remove Hygene media from top of
filter bed and place in suitable
container for disposing with trash.

Another fine product by the manufacturers of General Ionics Water Conditioning Equipment
IONICS, INCORPORATED Routes 519 & 50 Bridgeville, Penna. 15017

V. J. Souda
9-2-76
407

FIRST CLASS
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PITTSBURGH, PA.

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POSTAGE WILL BE PAID BY



IONICS

IONICS, INCORPORATED

P. O. BOX 99 • Bridgeville, Pa. 15017



409

GENERAL IONICS WATER CONDITIONER . . . REGISTRATION OF LIMITED WARRANTY

IMPORTANT . . . COMPLETE AND MAIL IMMEDIATELY

You have just purchased the finest water conditioner available on the market today. It should give you years of satisfaction. The manufacturer, Ionics, Incorporated, has done everything within its power to make certain this equipment is satisfactory to you in every way. It warrants the material and workmanship of the product . . . BUT

You are not covered by any warranties as owner of this equipment until this card, properly filled out, is on file with Ionics, Incorporated. The card must be returned to Ionics, Incorporated, within two weeks of the date of equipment installation.

ACKNOWLEDGMENT OF RECEIPT OF LIMITED WARRANTY WILL BE MADE TO YOU BY IONICS, INCORPORATED BY RETURN MAIL

MODEL NO. _____ TANK NO. _____ DATE INSTALLED _____
Remarks _____
Owner _____ City, Zone, State _____
Street or RFD _____
Dealer _____
Address _____

IONICS, INCORPORATED • P. O. BOX 99, BRIDGEVILLE, PA. 15017

(Tear Off Here)

WATER CHARACTERISTICS (To be filled in by dealer)

- ☐ City Water
☐ Private Water Supply

Dealer Analysis

Reference No. _____

HARDNESS _____ g.p.g.

ph _____

IRON ppm.

TURBIDITY _____ ppm.

OTHER: _____

410

(Tear Off Here)

GENERAL IONICS DEALER INSTALLATION RECORD

Customer _____ City _____ State _____

Street or RFD _____ Phone _____

MODEL NO. _____ TANK NO. _____ DATE INSTALLED _____

WATER SUPPLY: City Water ☐ Shallow Well ☐ Private Supply ☐
Lake ☐ Deep Well ☐ ☐
Spring ☐

WATER CONDITIONED: Hot and Cold ☐ Hot Only ☐ Outside Faucet Bypass ☐

No. of Persons _____ No. of Bathrooms _____ No. of Showers _____

WATER USING APPLIANCES: Automatic Washer ☐ Dishwasher ☐ Disposal ☐
Air Conditioner ☐

PLUMBING: Pipe Size _____ Copper ☐ Brass ☐ Galvanized ☐ Iron ☐

Flow Rate of _____ Gpm is available at pressure of _____

Remarks _____

Total Price \$ _____ Installed by _____

IONICS, INCORPORATED • P. O. BOX 99, BRIDGEVILLE, PA. 15017

WATER CHARACTERISTICS (To be filled in by dealer)

ANALYSIS

REFERENCE NO.

Has copy of analysis been forwarded to Ionics, Inc.?

Yes ☐ No ☐

HARDNESS _____ g.p.g.

ph

IRON ppm.

TURBIDITY _____ ppm.

OTHER: _____

411

Congratulations

Ionics, Incorporated welcomes you to a new, care-free way of life with conditioned water. You can take pride and satisfaction knowing that you own the very best.

We are proud that you have selected the General Ionics deluxe quality MIV Water Conditioner for your home. Your sound judgment is supported by the wide acceptance received for these units throughout the United States and Europe. More and more quality conscious homeowners are purchasing General Ionics Water Conditioning equipment because of its superior performance and its premium quality workmanship.

The following pages of this booklet will introduce you to your new MIV Water Conditioner by explaining operation, care and maintenance. In addition, the booklet provides recommendations for getting the very best performance from your unit as well as answers to commonly asked questions.



A. E. Daniell
Chairman of Board and
Chief Executive Officer
Ionics, Incorporated

Questions & Answers Concerning The Model MIVSH
Bacteriostatic Water Conditioner

Q. What is a Bacteriostatic Water Conditioner?

A. A Bacteriostatic Water Conditioner is one which in addition to softening the water also inhibits the growth of bacteria.

Q. Is there a need to inhibit the growth of bacteria in already "potable" water?

A. Since "potable" water can, by law, contain a certain number of harmless bacteria indigenous to municipally treated water, the potential for a build-up or growth of these bacteria trapped within the ion exchange softening filter medium does exist.

Q. Why is there a build-up of bacteria in a water conditioning filter unit?

A. The low level of bacteria in the raw water along with organic compounds normally present in a water supply become trapped in the filter bed medium. After a period of time, the filter bed will contain considerable number of bacteria and in the presence of the organic compounds, which becomes a source of nutrients for bacteria, this filter becomes a breeding place for bacterial growth.

From experience, this is the best time because your water demand is lowest then and regeneration will not interfere with baths, washing clothes, etc. However, regular water is available from all faucets during the regeneration cycle through a by-pass built into the unit's automatic valve. With the General Ionics Water Conditioner you are never without water.

It is a good idea to wipe the unit occasionally and then apply a good coat of wax. This procedure will keep your water conditioner looking bright and clean for a lifetime.

In case some problem should arise, you can easily by-pass the unit by throwing one lever (see illustration on page 6). Then call your authorized General Ionics dealer. He has been trained in all phases of maintenance and repair work and will have the unit back in operation quickly. If there is not a General Ionics dealer in your vicinity, then contact another reliable water conditioning firm. Failing that, please write directly to the factory: Ionics, Incorporated, P. O. Box 99, Bridgeville, Pa. 15017, Attn: Service Dept. NOTE: Whenever corresponding with the factory, be sure to include the model and serial number written on the inside back cover of this booklet. Explain the problem as best you can. With this information factory technicians can handle the problem promptly with little chance of error.

Regeneration

Your MIV Water Conditioning unit consists of a tank filled with a premeasured amount of a special mineral called S-759, formulated especially for General Ionics equipment. On top of the tank is the control valve and timer, which works on the same principle as an electric clock. Alongside the unit is a storage tank which holds the salt and brine for the regeneration cycle. The day and the hour for regeneration, as well as the salt dosage, have been set at the time of installation by the installer, who has carefully calculated this cycle according to your family needs. **DO NOT CHANGE THESE SETTINGS WITHOUT FIRST CONSULTING YOUR DEALER.**

Regeneration means recharging or recleaning the special S-759 mineral. It is important to know that the entire cycle is automatic and you will have nothing to do with it. The following is for your own enlightenment . . . and to demonstrate the thorough-

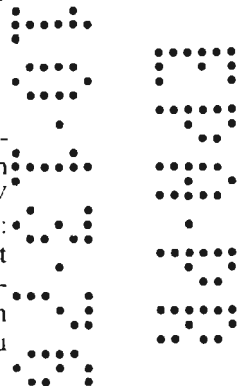
ness of the automatic cycle. 1. Backwashing, which reverses the action of the water, throws off the sediment (called turbidity) that has been filtered out of the water, and flushes it down the drain. 2. Salt, as brine, is injected into the unit to clean and revitalize the S-759 mineral. (The amount of salt used is controlled by a float valve, which operates the same as the float in the water tank of your toilet.) 3. Slow rinse. 4. Fast rinse. 5. Valve automatically returns to the service position to again supply you with good, conditioned water.

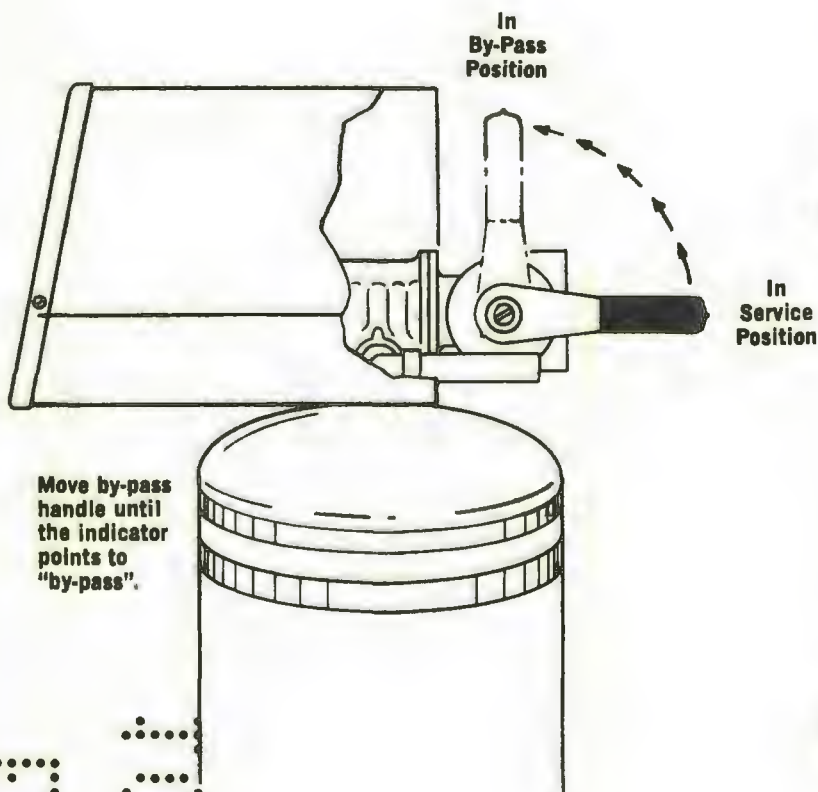
Having Weekend Guests?

As mentioned previously, your General Ionics unit is set for your own needs. Having guests will naturally place a greater demand for conditioned water on the unit. To alleviate this, your unit is equipped with a manual regeneration lever, which you can turn to start the recharging cycle at any time (see page 9). This "extra" regeneration will not interfere with the regular programmed cycle.

Going on Vacation?

It is senseless to regenerate while you are on vacation since you will be wasting salt recharging an already charged unit. Your General Ionics MIV Water Conditioner has taken vacations into account: Just close the by-pass valve. By doing so the unit will continue to go through the already set regeneration cycle, but actually will not regenerate. When you return home, open the by-pass valve, and you will again have conditioned water as before.





MIV By-Pass Instruction

- In case any problem should occur that cannot be immediately resolved, it is recommended to by-pass the unit as shown and call your authorized General Ionics dealer.

What Salt to Use

Salt is your water conditioner's fuel. Using the right "fuel" is as important here as it is to get the best performance from your car. It is strongly recommended to use only nugget or pellet type salt in your MIV Water Conditioner. This type of salt is pure and free of undesirable insolubles. Nugget or pellet type water conditioner salt is available from your General Ionics dealer.

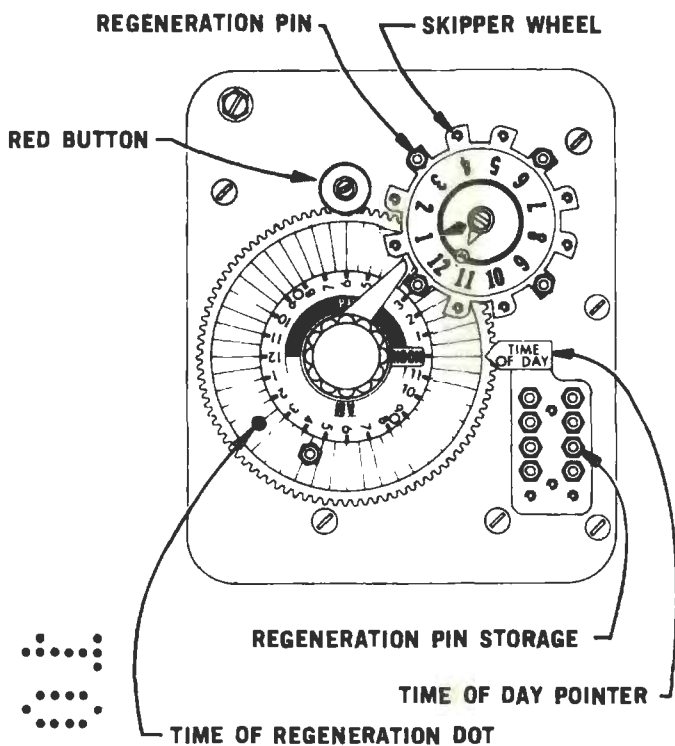
NOTE: Common rock salt is **not** recommended because much of it contains insolubles. The continued use of common rock salt will not only necessitate more frequent cleaning of the brine tank, or worse, may cause a malfunction of the valving. However, specially processed water softener rock salt, as handled by your local dealer, may be used.

When to Add Salt

The MIV brine tank has a capacity up to 250 lbs. of nugget or pellet salt. You can add salt whenever it is most convenient for you, but it is important to replenish the supply before the pellets reach the "add salt" level indicated by the label on the salt storage tank.

Bridging or Caking

The salt platform in your MIV Water Conditioner has been engineered to eliminate salt bridging or caking in the brine tank. However, under certain atmospheric conditions this can occur and will prevent the salt from coming in contact with the water level. When your water seems to be hard, check the salt in the storage tank. If it appears to be bridging or caking, break it up with a short wooden stick. In doing so, be careful not to probe the full depth of the brine tank because you may damage the salt platform.



Timer

- Your MIV automatic water conditioner timer requires no more attention than any electric clock. There are just two settings that you may need to make.

HOW TO RESET THE TIME OF DAY

If you should have a power failure or want to adjust for Daylight Savings Time, follow these instructions:

1. Press and hold in the red button to disengage the drive gear.
2. Turn the large gear until the actual time of day is opposite the "time of day" pointer.
3. Release the red button to re-engage the drive gear. Make certain—after releasing the red button—that the drive gear (behind the red button) is properly meshed with the large gear.

HOW TO MANUALLY REGENERATE YOUR WATER CONDITIONER

Your installer will tell you how many days your MIV unit is programmed to regenerate. To start the cycle manually, without affecting the regular programmed sequence, follow these instructions:

Depress red button and then, being careful not to move large gear on front of timer, turn the black center knob until the attached lever points to the "M" indicated by the red center pointer on the "Day of Regeneration" disc. Release red button.

This slight movement of the black center knob engages the program wheel and starts the regeneration cycle.

(The black center knob and lever will make one revolution in the next three hours and stop in the position shown on this drawing. Even though it takes three hours for this center knob and pointer to complete one revolution, the actual regeneration cycle of your unit might be set to complete itself in only half this time. In any event, conditioned water may be drawn any time after the rinse water stops flowing from the unit's drain line.)

Q. Will conditioned water give you a cleaner, brighter wash?

A. Yes. For best results you should use the proper amount of laundering agent with conditioned water. Learn to use less laundering agent because none of the cleansing compound will be wasted as in hard water cleaning. The amount of laundering agent you use depends on (1) its effectiveness, (2) the volume and temperature of water, (3) the size of the wash load, and (4) the type and amount of dirt and grime.

Q. Why not use synthetic detergents, which make suds even in hard water?

A. Soaps have proved themselves superior cleaning agents when the water is conditioned. In addition, detergents are much harder on fabrics than good, solid soap.

Q. Does conditioned water remove scale from pipes?

A. Yes, conditioned water will help to clean out pipes, increasing the flow of water. However, this scale removal is not accomplished immediately. It will take as long to remove the scale as it did to build up.

Q. Will a water conditioner prevent corrosion in a water heater or in the plumbing?

A. Yes, both scaling and corrosion are prevented, insuring the heater and pipes against the two things that shorten their life.

Q. Will a water conditioner increase the life of my water heater?

A. Definitely. The lime salts (boiler scale) which fall to the bottom of a water heater insulate the heating surface and thus tend to burn out the heater. Also, because of its insulating effect, this scale accumulation can increase gas or electricity consumption by as much as 25%.

Q. Will the rinse water from the conditioner affect the operation of a septic tank or cesspool?

A. No. Tens of thousands of conditioners are rinsed into such systems. Continual studies have shown there are no adverse effects.

General Ionics Water Conditioner LIMITED WARRANTY

This should be kept in a safe place by the owner

GENERAL CONDITIONS

Ionics, Incorporated, Bridgeville, Pa., warrants that the General Ionics Water Conditioner to which this limited warranty applies is free from defects in material and workmanship. The attached limited warranty agreement card must be filled out, mailed to, and received by Ionics, Incorporated, within two (2) weeks of the date of installation of the equipment for this limited warranty to be effective. **ACKNOWLEDGMENT OF THE RECEIPT OF LIMITED WARRANTY AGREEMENT CARD WILL BE MADE BY IONICS, INCORPORATED.**

This limited warranty is extended directly by the manufacturer to the owner, and is the sole warranty applicable. Any other warranties or guarantees, oral or written, expressed or implied, are not recognized.

LIMITED LIFETIME WARRANTY ON MIV MINERAL TANK

This MIV General Ionics Water Conditioning unit carries a limited lifetime warranty on the mineral tank. Any such mineral tank that becomes unusable because of leakage, corrosion, or rupture will be replaced or repaired at the option of Ionics, Incorporated. The defective tank must be returned to Ionics, Incorporated, transportation provided, within 30 days from date of failure for this limited warranty to be effective.

ELECTRICAL PARTS

Electrical components are warranted for a period of one (1) year of date of installation, provided the defective part is returned, prepaid to Ionics, Incorporated.

Valve and/or control parts are warranted for a period of five (5) years from date of installation. Any such components found to be defective will be replaced or repaired, within five years of date of installation, provided the defective part is returned, prepaid, to Ionics, Incorporated.

